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BY

R. G. HAWTREY

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PREFACE.

THIS book was written during the War. The first edition went to press in June, 1919, the very month in which Peace was signed. At that time the normal operation of currency and credit belonged to a past that was becoming more and more remote. The present was chaotic, and the future obscure.

It seemed best to expound the main theory of the subject in terms of pre-war conditions and to illustrate it by historical chapters. On the other hand, the chapters on the War and on conditions after the War were neither historical nor theoretical, but were concerned with the new practical problems that were arising on every side.

The second edition, which appeared in 1923, embodied no very extensive revision, but something was added on the events and controversies of the intervening period.

I have taken the opportunity of this new edition to make a much more thorough revision, and altogether about a third of the book has been re-written, and numerous small amendments have been made.

In the first place, a clear division is now made between the theoretical portion (Part I.) and the historical (Part II.). The chapters dealing with War in general and the Great War in particular have been re-written. Two chapters, on war finance and inflation, and on the consequences and remedies of inflation, are included in the theoretical portion. Two chapters on the Great War and subsequent events appear in the historical portion. Needless to say, I have not attempted anything that could be called a monetary history of those crowded years; I have simply related some of the salient events with a view to illustrating the theoretical chapters.

Secondly, the theoretical portion of the book has been thoroughly revised. The main argument and method have not been changed, but in numerous places the reasoning has been elaborated or amended, in the light of the multifarious discussions evoked by the monetary experiences of the last few years. The greater part of Chapter V. on the Foreign Exchanges has been re-written. So also has been Chapter X. on Financial Crises. The former chapter on Paper Money and the Quantity Theory has been extensively added to, and has been divided into two (Chapters III. and IV.).

Thirdly, references to matters of fact in the course of the theoretical exposition have been brought up to date.

Fourthly, I have had the advantage of referring to several works relating to the subject-matter of some of the historical chapters, which have been published since those chapters were first written.

Among the principal topics which have received new or revised treatment may be mentioned the following:—

Criticisms of several alternative versions of the Quantity Theory (pp. 36-40);

In the theory of the foreign exchanges, the relation of the balance of payments to the internal and external price levels, and to the doctrine of purchasing power parity (pp. 67-88);

The comparative merits of reserve laws based respectively on a fixed fiduciary issue and on a fixed proportion (pp. 102-6 and 116-19);

The international movement of funds for short-term investment in response to a high rate of discount (pp. 142-8);

Speculation in commodities, shares, and foreign exchange (pp. 170-4 and 254-8);

The currency collapses of 1922-3, and the return to the gold standard (pp. 421-40).

The greater part of Chapters XVII. and XVIII. appeared in the *Economic Journal* in 1918.

R. G. HAWTREY.

November, 1927.

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PART I.

THE THEORY OF CURRENCY AND CREDIT.

CHAPTER I.

CREDIT WITHOUT MONEY.

MONEY is one of those concepts which, like a teaspoon or an umbrella, but unlike an earthquake or a buttercup, are definable primarily by the use or purpose which they serve. The use or purpose of money is two-fold: it provides a medium of exchange and a measure of value.

According to the classical doctrine of money, mankind, in order to avoid the intolerable inconvenience of the direct barter of one kind of commodity or service for another, has learnt to choose one standard commodity to be offered by every buyer and accepted by every seller. Whether this standard commodity is established by law or custom, the seller willingly accepts it in payment because he knows that it will be accepted in turn by those from whom he wants to buy. The practice which makes the selected commodity the common medium of exchange almost inevitably makes it also the common measure of value. A market which priced each commodity separately in terms of every other would be impossibly complicated; the use of one standard commodity as money enables us to express all prices in terms of this one commodity.

If we approach the subject in this way, we naturally assume that the use of some selected commodity as money is the only alternative to a state of barter. To show what part the use of money plays in society, and how great a difference it makes, we are invited to turn to remote and benighted communities which have never learnt the use of it, or to conjecture what must have been the economic condition of mankind before money was originated at all. Such comparisons may well exaggerate the importance of money. In order to see it in its true proportion we ought rather to take a completely organised and civilised society, with all the modern developments of commerce and industry, and to examine to what extent such a society might have existed just as it is without the use of money, or which of its characteristics would be necessarily sacrificed. In other words, we have to find not the historical but the logical origin of money.

Suppose then that society is civilised, and that money does not exist. Goods are brought to market and exchanged. But even though there is no medium of exchange, it does not follow that they must be bartered directly for one another. If a man sells a ton of coals to another, this will create a *debt* from the buyer to the seller. But the buyer will have been himself a seller to some one else, and the seller will have been himself also a buyer. The dealers in the market can meet together and set off their debts and credits. But for this purpose the debts and credits, which represent the purchase and sale of a variety of goods, must be reduced to some common measure. In fact, a *unit* for the measurement of debts is indispensable. Where a commodity is used as money, it naturally supplies the unit for the measurement of debts. Where there is no money, the unit must be something wholly conventional and arbitrary. This is what is technically called a "money of account." Even when money is used, it may occasionally happen that the unit for the calculation of debts diverges in some degree from exact correspondence with the money in circulation. In that case the distinction between money and money of account immediately becomes a practical one. The value of the standard coin will be quoted in terms of the money of account, and varying amounts of the standard coin will be needed to pay a given debt. This is an approximation to the state of affairs which we are assuming.

But however conventional and arbitrary the unit may be, once it is established as the basis of the debts and prices and values of a market, it is bound to assume a certain continuity. If the bargains of a day were completed within the day, and every one could exactly balance his debts against his credits, the next day's business might start with an entirely new unit, as arbitrary as the other and having no relation to it. But in fact this balancing of debts and credits is impossible; each day's transactions will leave a residue of indebtedness to be carried forward to the next. The same unit will therefore necessarily be used from day to day. Each day's business starts with the record of the previous day's closing prices calculated in the unit. Each dealer in the market calculates his own command of wealth in the same unit; it affords the basis for his valuation both of what he wants to buy and of what he wants to sell, and he looks for only such divergence from the previous prices as variations of supply and demand will justify. The total effective demand for commodities in the market is limited to the number of units of the money of account that dealers are prepared to offer, and the number that they are prepared to offer over any period of time is limited according to the number that they hope to receive. Therefore, arbitrary as the unit is, capricious variations in its purchasing power will not occur.

Inconvenience would undoubtedly be caused by the absence of any generally recognised medium for the discharge of an outstanding balance of indebtedness. As between dealers balances can for the most part be carried forward from day to day, but immediate payment will sometimes be required, and in case of dispute there is no recognised "legal tender" in which a court of law can order the debtor to pay. How this problem might best be solved by the dealers we need not stop to inquire. This question of the payment of debts is a wider one than that of the settlement of balances among dealers in a market.

In the processes of production, a service rendered creates a debt from the person to whom the product belongs to the person who renders the service. Most people derive their incomes from services rendered either by their personal exertions or by the use of their property in production. The practice which we have attributed to the dealers of setting off one debt against another may be described as the use of *credit* as the means of payment. Debt and Credit are different names for the same thing. That which to the debtor is a debt, is to the creditor a credit.[1] Can credit be used as the means of payment not only between dealers, who are all men of business, but between employers and employees ?

An umbrella-maker might pay wages by creating a debt from himself to his workmen, but, in order that his workmen may *spend* their wages, the liability must be transferred to other shoulders than those of the umbrella-maker, for he can sell them nothing but umbrellas.

The solution of this difficulty is to be found in the intervention of some one who *deals in debts*. The umbrella-maker can sell to this " dealer in debts " the debts due to him for the umbrellas which he has sold, and in return the " dealer in debts " can take on himself the liability for the umbrella-maker's debts to his workmen. If every creditor assigned his rights as against his debtors to the dealers in debts, the setting off of debts against one another would be enormously facilitated.

A dealer in debts or credits is a *Banker*.[2] The debts of the whole community can be settled by transfers in the banker's books or by the delivery of documents, such as bank notes, representative of the banker's obligations. So long as the bankers remain solvent, their obligations supply a perfectly adequate means for the discharge of debts, because a debt can be just as well cancelled against another debt as extinguished by a payment of money. Of course it is still true that if the banker himself is sued in a Court of Law, there is no legal tender in which he can be ordered to pay. But if he is solvent, he can obtain a credit from another banker. In fact, the natural test of the solvency of a private trader would be his power of obtaining sufficient bank credits to meet his liabilities, and the test of the solvency of a banker would be the ready convertibility of his obligations into the obligations of other bankers.

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[1] This is H. D. Macleod's doctrine. The antithesis is between a debt and a credit. Credit, the noun of quantity, means the stuff of which debts (or credits) are made.

[2] This again is H. D. Macleod's definition. " A bank is merely a shop for the sale of credit " (*Theory of Credit*, 2nd edition, p. 606).

But, it may be asked, is not this to give away our whole hypothesis ? We postulated a state of society without money. Yet if a man can go to his banker and cash a cheque in bank notes, is not this to admit the existence of something which is money in all but name ? It is true that we are accustomed to think of bank credits as money. But this is only because for the practical purposes of every day the distinction between bank credits and money is rarely of any importance. And for all that a bank credit is *merely* a debt, differing from other debts only in the facilities allowed by the banker for transferring it to another creditor. No one imagines that a trade debt is money, though it may be as good an asset as a bank credit.

Having found in the bank credit the means of making payments, how far have we provided for a standard of value ?

The money of account provides a unit for the measurement of debts. It must also provide a unit for the measurement of prices. For when a price of any commodity is quoted in a market, this constitutes an offer, the acceptance of which creates a debt from the purchaser of the commodity to the vendor. The function of the price is to determine the magnitude of this debt.

But the unit for the measurement of prices is inevitably the unit for the measurement of values. Value, in the economic sense, means market value, and in practice the market determines value only in the form of price. The relative values of all commodities are measured by their relative prices. And the price of each commodity measures its value relative to the unit. What then is the value of the unit ? So long as value means value in exchange, the value of anything, whether it be a commodity or the monetary unit of account, must always be a *proportion*—a value in terms of something else. Just as every commodity has a value in terms of the unit, so the unit has a value in terms of each commodity.

It may be the equivalent, say, of a pair of trousers, or of a ton of coals.

Now in some sense or other the chief requirement of the unit of value is stability. But what do we mean by stability? It is all very well to say that the value of the unit must not vary, but there is no single interpretation of the value of the unit. Its value in coals may be stable, while its value in trousers may rise or fall. This problem is not peculiar to the conception of a money of account. It arises equally where the monetary unit is defined as the equivalent of a prescribed quantity of a selected commodity, such as gold. We still want to know whether the value of gold in terms of other commodities varies.

If we can point to a tendency for *all* prices of commodities, reckoned in the unit, to rise together, that means that the value of the unit is falling; and a tendency for all prices to fall means that the value of the unit is rising.

But if we want to *measure* such tendencies we must find some means of allowing for the variations of the prices of different products relative to one another. This is done by means of an Index Number. To measure a change in the price level over any interval of time, we take a representative selection of products, calculate the proportional change which has occurred during the interval in the price of each, and then take the average of these proportions. There are many ways of averaging, no one of which can be said to be theoretically perfect.[1] But all methods alike tend to reveal any *general* tendency affecting all commodities together. We will assume changes in the price level to be measurable. The inverse of the price level measures changes in what may be called the "wealth value" or "purchasing power" of the monetary unit.

Will the continuity in the use of the unit from day to day be of itself sufficient to prevent its wealth value varying in either direction unduly, even though it be unrestrained by equivalence to any specified commodity? If every one who received a credit immediately spent it on commodities, the function of the banker would be reduced to that of settling up every one's books at the end of the day. He would be a humble book-keeper, remunerated by a moderate commission or in some other suitable manner. Without doubt, however, just as every one in the economic societies we know keeps some ready money in hand, so in that which we are postulating every one would keep some unexhausted credit in hand to meet the payments, foreseen or unforeseen, which will have to be made in the near future. These reserves of unexhausted credit in the hands of the public are, of course, the counterparts of undischarged debts due from the bankers. As the reserves always exist, the bankers are perpetually indebted to that extent to the public. And as the public retain these reserves of credit of their own accord and for their own convenience, the bankers do not have to pay interest upon them, or, at any rate, do not pay interest at the full rate.

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[1] See Professor Irving Fisher's *Making of Index Numbers*. The difficulties are not entirely a matter of method. They arise from flaws in the very conception of wealth as something *measurable* independently of differences of time and place (see my *Economic Problem*, p. 178).

Now the bankers are merely dealers in credit. They do not take over liabilities except in consideration of receiving equal assets. The umbrella-maker who wishes to pay his employees in credits on a banker, must purchase these credits out of the proceeds of his umbrellas. But a banker is not willing to deal in umbrellas, and will not buy them himself. It is of the essence of the banker's position that he sells credits to all sorts of producers and dealers, so that his credits may be accepted in payment by all sorts. He will find it more convenient (as actual bankers do) to *lend* his credits rather than to buy goods. His assets will consist mainly of advances made to producers and dealers, who will employ the credits advanced in their respective businesses and will pay interest upon them out of the profits so made.

The great credit-machine will work very much as it does in the actual world. An order is given by a merchant to a manufacturer to supply a certain quantity of goods. The manufacturer borrows from his banker a sufficient credit to meet the necessary expenses of manufacture, including the cost of raw material, for the period which will intervene before the goods can be delivered and payment received from the merchant. When the goods are delivered the merchant in turn borrows their value for the period for which they are likely to be on his hands. The goods may pass from one manufacturer to another, and from one dealer to another, several times before they are finally disposed of piecemeal by the retail dealers to the consumers. Each manufacturer or dealer will probably be indebted for a part at any rate of their value, so long as he holds them. A debt, as it were, is attached to the goods so long as they are being *dealt* in—that is to say, bought with a view to being sold. This debt is only finally paid off when the goods are sold, not to be dealt in, but to be *consumed*. But each manufacturer or dealer is quit of the debt when he is quit of the goods. He borrows to meet the expense of making or buying the goods, uses the proceeds of his borrowing to pay the people employed in manufacturing them, or to defray the purchase price ; then, when he disposes of them, applies the proceeds to pay off the sum borrowed, and retains any balance as his own profit. Thus *new* credits, as distinguished from those created merely in replacement of old ones, are created to pay the profits, remuneration, interest, etc., of those who contribute, either by their personal services or by the use of their property, to production.

The borrowing is done by traders—by those, that is, who either produce or buy goods, etc., with a view to subsequent sale. The stocks of goods in course of production, in transit or awaiting sale, are the property of the traders, and at any moment there is a stream of goods passing from trader to trader through all the successive stages. Simultaneously the corresponding credit operations are taking place. Any individual trader may be both making and receiving payments. His actual borrowing and repaying operations may have no definite relation to any individual buying and selling transactions, but will only represent the net result after his receipts and payments are set off against one another—that is to say, when his outlay on the production or purchase of goods exceeds his sales, he borrows ; when it is less, he repays. His indebtedness rises and falls with his stock in trade.

Consider what happens in a particular week. Production is increasing the traders' stocks ; sales to the consumer are diminishing them. Those of the traders who are engaged in production are paying out such part of the expenses of production as come in course of payment in the week. The retailers are receiving the sums that the consumers spend in the week. These consumers are to a great extent the same people who receive payment from the producing section (though of course there are some classes of the community, such as house-owners and domestic servants, whose incomes do not come from traders as such).

Between the retailing and producing sections of traders stands the wholesale section, the merchants.

The wholesale merchants fill a very important place in the trading system. They judge demand and regulate supply. The outlook of the retailer is local and limited (except where wholesale and retail dealing are combined, and the differentiation of function is lost), and he cannot make a comprehensive survey of the prospects of demand. It devolves, therefore, on the wholesale merchant to set the machinery of production at work by giving orders to the producers, and incidentally to start the machinery of credit. This is especially true of manufacturers and the production of raw materials. In agricultural production supply is a matter of opportunity and demand is comparatively steady, and there, consequently, the functions of the merchant count for less. The production of fixed capital is different again. The order is given not by a merchant but by a promoter, who makes it his business to procure savings to cover the cost. Money invested is, of course, *spent ;* it is spent on capital, that is to say, on the goods of which capital consists. The demand for capital is made up of people's savings in just the same way as the demand for consumable products is made up of their expenditure on their present needs. In this process the need for temporary borrowing comes in at two points. The contractor, who engages to construct the new capital, may borrow to meet the expenses in anticipation of the payments he is to receive from the promoter. And the promoter himself may have to borrow in anticipation of the savings he hopes to collect from the investor.

When a banker lends, we say that he grants or creates credit or "a credit." This is a loose way of describing a double transaction. The banker assumes an immediate obligation to his customer, in exchange for the customer's obligation to him at a future date. The banker's obligation or "bank credit" meets the customer's need, because it can be assigned away as a means of payment. The customer's obligation, since it yields interest or discount for the period before it becomes due, supplies the banker's profit. Thus *two* credits or debts are really created, though only one of them is destined to be used as a means of payment.[1]

In our selected week there will be determinate market rates of wages, salaries, etc., and determinate market prices of commodities. The merchant, in deciding at what price he will order goods, must be guided by the then prevailing market prices; the manufacturer, in deciding what price he will accept, must be guided by the then existing costs of production. To a great extent the incomes which the consumers have to spend, and which constitute the demand for commodities, are the component parts of those same costs of production, it being understood that the traders themselves are included among the consumers and their profits among the costs of production.

The consumer's purchasing power is therefore largely supplied out of the credits which the traders borrow from the banks. Credit originates in production and is extinguished in consumption. The supply of purchasing power is thus regulated by the transactions which require to be financed. It starts from the giving of an order to the producer, and the quantity of purchasing power brought into being when the producer borrows to carry out the order depends upon the price at which it is placed. The capacity of the productive resources of the community is limited, and, at any rate, when this limit is approached, continuity in prices implies continuity in the supply of purchasing power.

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[1] "A Banker is a Trader who buys Money and Credits, Debts, or Rights of Action payable at a future time by creating and issuing Credits, Debts, or Rights of Action payable on Demand" (Macleod, *loc. cit.*, p. 585).

Every borrower in fact has to take account of conditions that limit the amount which he borrows, and this very limitation of borrowing tends to confine the income and consequently the expenditure of the consumer to their previous limits.

Nevertheless, it is obvious that this principle of continuity is incomplete. There is room for variation in the volume of orders, the rapidity of their execution, the quantity of credit with which they are financed. If we are to prove that the monetary unit will be a stable standard of value, we must show that if exposed to any disturbing cause the unit will tend to *return* to its former value, or, at any rate, that it will arrive at a new and relatively stable value not differing much from the old.

Suppose then that the routine of the credit machinery is interrupted. This routine depends upon the new borrowing being on the whole sufficient and not more than sufficient to replace the advances paid off. The credit created must be equal to the credit extinguished. Granted this, the stability of every other part of the machine follows.

First consider the case where there is a curtailment of new borrowings. It may be, for instance, that the merchants have given fewer new orders to the manufacturers, or perhaps that borrowers have been applying to the reduction of their indebtedness credits which they would otherwise have spent. In the latter case, expenditure being diminished, sales will fall off and the stock of commodities in the hands of the dealers will be less drawn upon than usual, and the dealers will give smaller orders to the manufacturers for the replenishment of those stocks. Thus in either case a slackening in the creation of new credits means a diminution of orders to the manufacturers. But the result of this will be that the labour and plant of the community are no longer fully employed, and the total amount of wages and profits will be diminished. Consequently the expenditure of the public will begin to fall off. But this will react on the sales of the retailers and merchants. They in turn will further restrict their orders for fresh supplies of goods, and so the original restriction of credit will tend to repeat and reinforce itself. A corrective tendency will, however, presently be at work. The restriction of credit means a restriction of the bankers' business. The bankers will not willingly acquiesce in the consequent shrinkage of their profits, and they will try to tempt their customers to borrow. They will, in fact, reduce their charge for interest.

It should be observed that, quite apart from any deliberate action by the bankers, there is in any case an important influence at work to lower the rate of interest. As we have seen, the curtailment of credit occasions a flagging of the demand for commodities. This flagging of demand will produce a fall of prices. The merchants will find that their stocks of goods lose value while they hold them, and this loss of value will diminish the profit out of which they pay interest on the loans with which these stocks are financed. Falling prices of themselves therefore make borrowing less attractive and reduce the rate of interest which borrowers are willing to pay. The bankers must reduce their charges of interest accordingly before they can even induce their customers to continue borrowing on the diminished scale which their turnover of goods will justify, and, if these customers are to be tempted to increase their borrowing, the rate of interest must be reduced even below this low level.

If, as is not impossible, the bankers fail to encourage borrowing in this way, the restriction of credit and consequent depression of trade will go on. By the time the old routine has been resumed the volume of credits in circulation and the nominal amount of wages and prices paid out of them (calculated in the conventional unit of value) may have been enormously reduced. In other words, the wealth value of that unit may have been enormously increased. Nor is there any tendency for it automatically to return to its former value. Indeed, a new disturbance may be initiated in the form of a new curtailment of credits, and after a new period of restricted trade may end in yet a further appreciation of the unit of value.

The probability of a contrary variation, an expansion of credits and a depreciation of the unit of value, is, however, at all times much greater. And this movement is even more unlimited in scope. Self-interest prompts both the enterprising trader ever to borrow more, and the enterprising banker ever to lend more, for to each the increase in his credit operations means an increase in his business. Suppose some of the merchants, in the hope of extending their business, give increased orders to the manufacturers. The manufacturers will forthwith borrow more than usual from their bankers. They will urge on the business of manufacture, will pay more to their employees, and will receive greater profits in proportion to their greater output. They and their employees will have more to spend; the retailers will dispose of more goods, and will take over more from the merchants; the merchants will give yet further orders to the manufacturers. The manufacturers, finding their productive capacity overstrained, will quote higher prices to the merchants; the merchants, being unable to supply the retailers fast enough or to maintain their stocks of goods, will raise prices to the retailers, and the retailers will raise prices to the public. The general rise of prices will involve a proportional increase of borrowing to finance a given output of goods, over and above the increase necessitated by the increase of output. This increase of borrowing, meaning an increase in the volume of credit, will further stimulate trade.

This process is what is commonly called an inflation of credit. Where will it end? An indefinite expansion seems to be in the immediate interest of merchants and bankers alike. The continuous and progressive rise of prices makes it profitable to hold goods in stock, and the rate of interest which the merchant who holds such goods is prepared to pay is correspondingly high. Thus the merchant and the banker share between them a larger rate of profit on a larger turnover. The credit created for the purposes of production becomes purchasing power in the hands of the people engaged in production; the greater the amount of credit created, the greater will be the amount of purchasing power and the better the market for the sale of all kinds of goods. The better the market the greater the demand for credit. Thus an increase in the supply of credit itself stimulates the demand for credit, just as a restriction in the supply of credit leads to a decline in the demand for credit. Either the expansion or the contraction of credit may therefore proceed absolutely without limit, and the corresponding fall or rise in the wealth value of the monetary unit would therefore also proceed without limit. In each case all standard of value will be completely lost.

But, it may be asked, why invent this fantastic hypothesis of a civilisation without money, merely to prove, what was obvious from the beginning, that prices released from any physical standard of value would vary without limit ? Parenthetically, it should be remarked that the hypothesis is not so entirely fantastic ; during the first fifteen years of the Bank Restriction Act, 1797 to 1812, the universal means of payment in England was the Bank of England note, which was not legal tender, and was merely the evidence of a debt due from the Bank, but a debt not payable in gold or any other medium. But without pursuing that subject further here,[1] we may say that the justification for the hypothesis is that it provides us with an analysis of the functions of credit, which would otherwise be inextricably interwoven with the functions of money.

In the first place, we can define the money of account as the unit for the measurement of debts ; we can see that the unit for the measurement of debts is necessarily also the unit for the measurement of prices, and that the existence of market prices fixes a relation between the unit on the one hand and every form of wealth on the other.

Next we can show that the business of the dealer in debts, or banker, intervenes to provide a universal means of payment, differing in no essential respect from the bank credits with which we are familiar, save only that of convertibility into money. Bank credits, being debts, are expressed in the money of account.

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[1] See chap. xviii.

We then find that this apparently artificial system contains within itself a principle of continuity, by which it might be maintained in equilibrium. As every one's wealth is measured at any time in the monetary unit upon which transactions have till then been based, the sums which purchasers are prepared to offer are regulated by the value of this unit. The level of prices cannot be capriciously or discontinuously changed.

But finally it turns out that this equilibrium is *unstable.* Every displacement from the equilibrium position tends to magnify itself.

Further, our hypothesis may serve to show that there is a distinction between a debt and a promise to pay. A debt is fundamentally an obligation to give not money but *wealth.* It is by marketing wealth of some kind that the debtor can procure a credit to set off against the debt. Legally the use of money enables the debtor to close the transaction. From the economic standpoint, however, the creditor's claims are not fully satisfied till he has *spent* the money. He must go into the market and draw from it so much wealth as is represented by the purchasing power he has received. If, instead of receiving money from the debtor, he assigns away his right in the debt to some one else in exchange for the appropriate amount of wealth, he has taken a short cut to the same end. But in the absence of money there is a certain difficulty in closing transactions. The value of a debt depends upon the solvency of the debtor. The credit of the ordinary debtor is not good enough, or at any rate not well enough known, for his debt, unsupported by security or guarantee, to be a suitable means of payment. The use of bank credits would be necessary for this reason alone. But even banks are not always of unquestionable solvency, and in the exchange of a credit on one bank for a credit on another there is no finality. The need for a medium of payment which cannot legally be disputed is obvious.

We now see the part that money has to play. First of all, it has to provide the means for the legal discharge of a debt;[1] secondly, by supplying a standard of value, it has to correct the instability of credit. We started by saying that money is a medium of exchange. This is true enough; if goods are sold for money and the money is laid out on the purchase of goods, the former goods are indirectly exchanged for the latter, with money as the *medium* of exchange. But legally money is the means of discharging a debt, and this is really the more general conception. It is used as a medium of exchange because a purchase creates a debt, and money provides the means of paying the debt. When payment is made in ready money this merely means that the debt is *immediately* discharged. A purchase for money can always be analysed into the creation and discharge of a debt. The discharge of a debt in money cannot always be identified as the completion of a purchase or exchange.

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[1] Money may be established as the means of discharging a debt by custom and not by statute, provided a court of law or other tribunal will recognise it.

Credit and money are both equally media of exchange. Credit is often said to be a substitute for money. It would be just as accurate to say that money is a substitute for credit, that the legal means of discharging a debt is a substitute, so far as the creditor is concerned, for the debt itself.

The second function of money, that of providing a standard of value, arises naturally out of the first. Money must be measured, like a debt, in the money of account. The value of a debt immediately due is necessarily equal to the value of the means by which it can be legally paid. Thus the problem of stabilising credit is identified with the problem of stabilising the value of money. We shall find that the expansive tendencies of credit are in perpetual conflict with the maintenance of a fixed standard of value, and a great part of our subject is taken up with the problem of how best to reconcile this conflict.

CHAPTER II.

METALLIC MONEY.

We have now arrived then at a revised definition of money. It is the means established by law (or custom) for the payment of debts. Consequential upon this characteristic are both the functions by which we sought to define it at the outset, that of a medium of exchange and that of a standard of value.

According to the classical theory of money, as we saw, money is a selected *commodity*. Law or custom decrees that debts may be paid in gold or in silver, or perhaps indifferently in either. Gold and silver are the raw materials of certain industries, and have a value as such, and in virtue of this value they supply an independent standard for the measurement of debts. A banker's obligation, whether it take the form of a bank credit or a bank note, becomes an obligation to pay money. Such an obligation may be used as a medium of payment; a debtor who has a bank credit may pay his debt by assigning this bank credit to his creditor. But a bank credit, not being the *legal* means of discharging a debt, must be readily transformable into money if required. The banker's obligation must be to pay money.

If gold is to be the legal medium of payment, it must be put on the market in a form in which its quantity can be easily and quickly and certainly estimated. This is done by coining. The ostensible purpose of coining is to divide the gold up into small portions convenient for handling, and to certify by a stamped inscription that each such portion is of the prescribed weight and fineness. Under a system of free coinage anyone with gold to dispose of can bring it to the Government to be so divided up and certified, and this will be done either free of charge or at a charge nearly negligible in comparison with the value of the gold. If this system is effectively carried out, if all coin that is reduced by wear appreciably below the current weight is promptly withdrawn, if there is no obstacle to melting down coin for use otherwise than as currency, then the value of coin and the value of bullion can never diverge far, for either can be transformed into the other at a trifling expense. Gold as a commodity will then be really the standard of value.

The price of gold, that is to say, its value in terms of the money of account, is fixed. This fixed price, measured by the value of the coins into which a given quantity of gold is transformed, is called the coinage price of gold. According to the English Coinage Acts 623 sovereigns should weigh 160 ounces, and the coinage price of gold is £3 17s. 10½d. an ounce ($\frac{11}{12}$ fine).

Any departure from this system is regarded, under the classical theory, as a perversion. The nature, extent, and causes of such departures we shall have to consider later. In the present chapter we shall assume that a system of free coinage is faithfully and efficiently maintained. In the next chapter we shall turn to the consideration of systems in which the orthodox theory of free coinage is avowedly thrown aside.

The most important characteristics of the classical theory are that the value of the monetary unit is determined by the value of the metal for purposes other then coinage,[1] and that the supply of money, being dependent upon the supply of the metal, cannot be arbitrarily increased.

If a gold coinage is to be combined with a credit system, we have next to consider where the one will begin and the other end. A payment in coin being a legal discharge of a debt while a payment in credit is not, coin will always be used in preference to credit unless there is some superiority of convenience or other advantage in the use of credit. For large payments the superior convenience of credit is obvious, since it avoids the trouble of counting, handling, and scrutinising the coin, and the cost and risk of transport and storage. Moreover, the privileges of a banker's customer are valuable to the well-to-do man, and especially so to the trader. Of course, all these advantages presuppose the solvency of the banker, but we may assume that the risk of failure of a large and well-established bank, if not absolutely negligible, is at any rate small compared with the risk of losing money which, instead of being deposited at a bank, is kept at a trader's premises, where the risk of loss by theft falls on him.

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[1] This is only true subject to reservations (see chap. xii).

For small payments the advantages of credit are not so considerable. Payments by cheque, though they save trouble for large sums, give additional trouble for small sums. If small payments are to be made in credit at all, they must be made with bank notes. But bank notes have very little advantage over coin. Like coin they may be lost; like coin they need to be counted, and change must sometimes be asked for them. And while the small bank note seems to have no advantage over coin to set against its legal inferiority in discharging a debt, it is subject to a special disadvantage in that it may circulate in the hands of uninformed people who have no means of judging of the credit of the bank which issued it, and who may be seized with an unreasonable yet widespread distrust. The mere fact that there are people who are unwilling to accept the notes of a particular bank will be quite a sufficient reason for every one to demand coin in exchange for the notes. Even those who themselves think the bank perfectly solvent do not want to hold their purchasing power in a form which would not be accepted by every one. Small bank notes (i.e. for amounts smaller than the prevalent weekly wage of the working class) are likely to be an embarrassment rather than a source of profit to the issuing bank, and accordingly they tend to fall out of use, except where there is some special reason to favour them.[1]

Consequently the dividing line between coin and credit is likely to separate large from small transactions. The weekly wages of the working man or low-paid employee will be paid wholly in coin. The relatively highly-paid employee will be paid in credit. The large transactions between men of business will, of course, all be carried through with credit, and their profits will accumulate in the form of credit. But even the man who receives his income in the form of credit will use coin for small retail payments, railway fares, etc. It is therefore easy to see what modifications ought to be introduced into the picture given in the preceding chapter of the transaction of a week's business on a credit basis, in order to allow for the introduction of money.

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[1] This does not apply to legal tender notes which are themselves money (see chap. iii.).

The manufacturer who has obtained a credit from his banker to enable him to execute the order given him by a dealer, will draw out week by week a certain amount of cash against that credit for the payment of wages. The recipients of this cash will spend it in the course of the week on their day-to-day expenses, and so it will come into the hands of the retailers, rent-collectors, tramway companies, etc., who will pay it all back into the banks. At the same time, the manufacturers, merchants, salaried employees, and other people with large enough incomes to have banking accounts, will all need to keep part of their available purchasing power in their pockets in coin. The sum so retained, being destined only for petty expenses, will be small in comparison with their incomes, but they will spend a certain amount out of it in the course of the week, and draw sums out of the banks equal, on an average, to what they have spent. The dealers who intervene between the retailer and the manufacturer are concerned in large transactions for which credit is appropriate.

The use of money does not disestablish the normal process of creating credit. Money, it is true, is always being paid into the banks by the retailers and others who receive it in the course of business, and they of course receive bank credits in return for the money thus deposited. But for the manufacturers and others who have to pay money out, credits are still created by the exchange of obligations, the banker's immediate obligation being given to his customer in exchange for the customer's obligation to repay at a future date. We shall still describe this dual operation as the creation of credit

By its means the banker creates the means of payment out of nothing, whereas when he receives a bag of money from his customer, one means of payment, a bank credit, is merely substituted for another, an equal amount of cash.

Now let us examine again the effects of a disturbance of the credit machine, with the modifications introduced by the use of money. Consider the effects of an increase in the credit given. Suppose that in a particular week somewhat larger orders than usual are given to the manufacturers, and that the manufacturers obtain correspondingly larger credits from the banks. These larger credits are required for the increased output of goods, and are drawn upon for increased payments of wages, more hands being employed and overtime perhaps being worked. A greater amount of cash is drawn out of the banks than is usual, and is added to the stock of cash in the hands of the working men. A part, but probably not the whole, of these increased receipts of cash will be spent, and will so come back to the banks through the retailers. There will thus be an increase in the volume of purchases by the working classes, which will lead to further orders yet being given to the manufacturers. The accelerated sales will mean increased profits to the retailers and merchants, and the increased output will mean increased profits to the manufacturers; as soon as these increased profits come to be drawn upon, there will be increased purchases by the credit-using classes. These increased purchases, like those of the wage-earners, will be quickly reflected in further orders to replenish the stocks of commodities.

The important question to consider is what will be the effect of these movements on the distribution of coin, for the use of coin is the new factor in the problem. The stock of coin is made up of that in the hands of the bankers and that in the hands of the public. The coin in the hands of the public is made up of that in the hands of the wage-earners and others who have not banking accounts, and the pocket-money of those who have. The pocket-money even of a very rich man may be quite a small sum. The number of individuals with banking accounts is small compared with the number of

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those who have none. The total amount of coin which the former class, taken in the aggregate, uses as pocket-money is probably not large compared with the cash which represents the entire liquid resources of the much more numerous working class. Further, the pocket-money of the well-to-do man probably varies little ; it is hardly, if at all, greater in a time of prosperity than in a time of adversity. The working man, on the other hand, is driven from time to time to draw on his reserve of cash in hard times, and finds it difficult to make good the gaps in it. But when good times come, and he gets regular employment with overtime earnings and presently an increase in the rate of wages as well, he can restore his reserve to the amount which prudence requires. No doubt the thrifty man will put his savings into a savings bank, or some other agency that will keep them safe and pay interest on them. But he must first see to it that he has a little money in the house, and, even when he has enough, and all his further savings are going into the savings bank, he will not pay in every half-crown as he earns it ; so long as he is saving he will usually have some money destined for the savings bank waiting in the house. Consequently, when employment is good and wages high, a certain amount of the money paid out each week to the workmen fails to come back to the banks in the following week, and there is in fact what is called a withdrawal of money for " internal circulation." The fact that this drain of coin occurs is of great importance in the theory of currency. The stock of coin in the hands of the bankers is limited. Once it is exhausted they will fail to discharge their obligation to provide money on demand, however solvent they may be. If they are to avoid this calamity they must take steps to check the drain of coin.

The drain of coin is only one among several effects of the expansion of credit. Of the net amount of new credit created in a week—that is to say, of the excess of new credits created over existing credits paid off—a part goes into the hands of the well-to-do consumer, and is spent by him in the form of credit, without being transformed at any stage into coin. It is only a part which is paid out in coin to the wage-earners, and the greater part of this part comes back to the retailers in return for goods purchased. At the beginning, therefore, the drain of coin into circulation is hardly perceptible. The important effect of the expanding credits at that stage is the additional purchasing for consumption by both credit-using and coin-using classes. It is only when this stimulus to the sales of goods has reacted to a considerable degree upon output and prices, that a really marked effect will be felt on working class earnings, and consequently on the power of the working classes to absorb coin. Though regularity of employment and a resort to overtime increase *earnings* to a material extent, it is only after a considerable interval that the prosperity of the manufacturer is reflected in an increase of *wages*. Consequently it is only very gradually that the bankers can become aware that the growth of credits is threatening their reserves of coin. By the time the drain of coin becomes perceptible, credits will already have been increased to such a point that there would be a heavy additional drain even if there were no further expansion of credits. Not only are wages still below the level which the existing rates of profits would justify, but the wage-earners are still in process of adding their weekly surplus receipts to their little hoards, and the cash in their hands is short of the total which it will reach even without any increase of wages. Yet, unless the bankers are gifted with a degree of foresight that practical men do not always possess, it will only be at this stage that they will take any measures to safeguard their position.

The danger arises from the undue increase of credits ; the remedy is to be found only in a curtailment of credits. The grant of a credit rests in a banker's absolute discretion. He is under no legal obligation to accommodate a borrower. But a flat refusal to lend to traders who genuinely need advances for the purposes of their legitimate business may have disastrous consequences. If a few bankers take this action, the result is merely to increase the pressure on the rest. If there is a general refusal to lend, there will be a general disorganisation of business. Dealers who have undertaken to buy cannot fulfil their contracts. Those who expected to sell to them find themselves without the funds they had counted on, and yet cannot tide over their difficulty by borrowing. The result must be that perfectly solvent traders fail to meet their engagements.

Short of an absolute refusal to lend, there is much that bankers can do to restrict credit. They can apply a more severe standard to the security offered ; they can reduce the maximum period for which they are willing to lend ; they can discriminate as to the purpose for which the borrower wants the loan. A banker knows much of the affairs of his customers, and can often practically veto hazardous or unnecessary enterprises, or can, at any rate, exercise much influence in advising caution.

But it has come to be recognised that the banker's principal instrument for the regulation of credit is the rate of interest When there is a scarcity of a commodity the price is raised, and the diminished supply goes to those who bid highest for it. The price charged for a loan is the interest upon it. If the demand for loans is outstripping the supply, the market can be brought into equilibrium by an increase in the rate of interest

It is sometimes urged as an objection to this course that the interest on advances is so unimportant an item in the profit and loss account of a trader that a rise in the rate would only have a very gradual effect, and that something much more drastic is needed, especially at a time of high profits. Now the high profits must, of course, be taken into account in deciding just what increase in the rate of interest is needed The reason why they are high is that prices are rising, and the value of any stock of goods grows, even while it is in the dealer's hands. But if the rate of interest is raised high enough to offset the extra profit anticipated from this cause, there is no reason why it should not react rapidly, almost immediately, on the demand for new credits. It may be conceded that the manufacturer, though he is not quite indifferent to the rate of interest, can afford to treat it as of small account in comparison with his other expenses. He is specially concerned to keep his plant and workmen fully employed. He gets his order from the wholesale dealer, and he is not going to refuse to accept it because to execute it he will have to pay 7 per cent. per annum for the money borrowed (for a few weeks only perhaps), instead of 4. But it is the wholesale dealer himself who is frightened by high interest. He borrows money to hold stocks of goods in the course of their passage from the manufacturer to the retailer. He makes his profit out of the difference between the price at which he buys and the price at which he sells, and the set-off against his gross profit for insurance, rent, wages, etc., is quite small compared to the whole value of the goods. The set-off on account of interest is therefore by no means unimportant. In the case of the manufacturer the value of the finished product may be, for example, three times that of the raw material. The actual expenses of manufacturing may be perhaps three-fourths of the two-thirds by which the value of the product is increased in course of manufacture, i.e. half the final value. The addition of 1 or 2 per cent. to this half is almost negligible. The merchant, on the other hand, buys and sells enormously more goods in proportion to his capital, but adds to what he buys not the large additional value represented by manufacture, but the relatively small additional value represented by the dealer's profit. This profit may be perhaps 10 per cent. on goods which are held in stock for, say, six months or more. Such part of the goods as are held with borrowed money will have to pay interest in addition to other expenses, and a sudden jump in a half-year's interest from 2 to 3½ per cent. may well make a merchant hesitate to order a fresh consignment. But it is the merchant, as we have seen, who takes the initiative in production. If he can be induced to delay giving fresh orders, though his own demand for loans will be unaffected till the time at which those orders would have been completed if he had given them, the manufacturer's demand for loans is diminished immediately. The merchant can stand a very considerable diminution of his normal stocks of goods without suffering any serious inconvenience, and any diminution in the value of his stocks diminishes by an equal amount his indebtedness to his banker. The period for which the merchant keeps his goods on hand unsold is directly proportional to the quantity of goods so kept ; the interest charge is proportional to this period ; but (apart from variations of market price) the profit on the turnover of the goods is independent of the period of storage. A rise in the rate of interest is thus a direct incentive to the merchant to keep down his stocks and delay giving fresh orders. And as he is so sensitive to the rate of interest, the whole machinery of credit, in which he plays such an important part, will be equally sensitive. But as has already been mentioned, the rise in the rate of interest must be sufficient to offset the effect of rising prices. If prices rise while the merchant holds his stocks of goods, the amount of the rise has to be added to his profit on the turnover. If, with prices unchanged, his profit would be 10 per cent., then with a 5 per cent. rise of prices his profit would be raised to 15 per cent. When dealers expect prices to rise, they try to increase their stocks in order to gain the advantage of this profit ; by doing so they increase the immediate demand, and tend to bring about the anticipated rise of price at an earlier date ; and the tendency to increase stocks ceases when this rise of the present price has gone far enough to wipe out the prospect of exceptional profit. In calculating whether it is worth while to go on adding to his stock, one of the factors of which the merchant has to take account is the payment of interest on the additional money to be borrowed for the period for which he must hold the goods. A rise in the rate of interest will affect his calculations very materially. When he is buying in the hope of a rise of prices, not only must he hold his stocks for a longer period than usual, and therefore pay more in interest at a given rate, but while the gain in price is more or less speculative, the extra charge for interest is certain.

The dealer in securities responds to a rise in the rate of interest in much the same way as the dealer in commodities. Indeed, he is even more sensitive to it. He buys securities to sell them with a narrow and uncertain margin ; his calculations are in small and varying percentages, among which the deadweight of an apparently trifling additional interest charge may be quite a serious factor.

When the bankers, perturbed by the drain of cash into circulation, put up the rate of interest, it is their aim to raise it to the critical point at which it is just sufficient to curb the enterprise of the dealers in securities and the dealers in commodities. If they can attain this point, the stream of fresh orders both for fixed capital and for consumable goods will be stemmed. And in proportion as production flags, the incomes derived from production will flag too. That intimate connection between the volume of fresh credit created and the demand for goods, which is the cause of the instability of credit, will be brought into play. But in practice it is exceedingly difficult for the bankers either to judge accurately when to take action, or to tell, when they have taken it, whether it is effective.

The expedient to which banks almost invariably have recourse is to aim at preserving a certain fixed proportion between their reserve of cash and their liabilities. If too much credit is given, the reserves of some or all of the banks will fall below this fixed proportion (which need not, of course, be the same for all the banks concerned). Each of the banks to which this happens will immediately take steps to diminish its credits and to restore its reserves to the conventional proportion, by charging a higher rate of interest, and the market rate of interest will thus be raised. If the rise in the rate is insufficient, warning will be given by a renewed fall in the cash reserves.

At first sight it would seem that this method of proceeding would absolutely secure the banking community against the danger of excessive credits. But there are sources of weakness in it. The true cause of an excessive demand for credits is to be found in the depletion of the merchants' stocks, the prosperity which enables the consumer to deplete those stocks by his purchases being due to the fresh orders given for their replenishment. But the productive powers of the community are limited, and, as its output approaches the maximum, further orders will only produce further and further delay in deliveries. The manufacturer's borrowings are proportional not to the orders awaiting execution, but to the work actually in hand, and there may thus be a great *latent* demand for credit of which the bankers know nothing. The bankers' balance sheets will only show the actual credits outstanding, and as the indebtedness of the merchants is proportional to their stocks, which have been depleted and cannot be quickly replenished, while that of the manufacturers is calculated only for the work actually in hand, the proportion of liabilities to cash may not be at all excessive, though, of course, the credits will be swollen, in both cases, by high prices.

The greater the accumulation of orders on the manufacturers' hands, the greater will be the earnings of their workmen, and the greater, more particularly, the demand for higher wages. Consequently, while the accumulation of orders is being worked off, the drain of cash will continue, and it will be just as formidable to the bankers' reserves, notwithstanding that the total of outstanding credits does not appear to be great. This situation is dangerous in two ways ; first, that, owing to the apparently moderate amount of outstanding credits, the bankers may believe themselves secure at a time when they ought to be taking prompt action ; and, secondly, that, even if they do take action, the effect will not be so rapid as they expect. They may really have checked the fundamental danger of the position, in that they have effectively stopped the stream of new orders from the merchants to the manufacturers, and yet the demand for fresh credits and the drain of cash into circulation may go on undiminished. The consequence may be a state of panic among the bankers, who, unaware of the cause of the apparent ineffectiveness of the measures they have taken, despair of saving themselves from failure, refuse credits recklessly, call in existing loans regardless of the embarrassment of the debtors, and precipitate a series of bankruptcies among their customers and themselves.

The fact is that there is no golden rule for keeping the extension of credits within bounds. If the bankers keep large reserves and take early steps to safeguard them, not merely when the proportion of reserve to liabilities falls below their conventional limit, but as soon as trade begins to become suspiciously profitable, and if they have the courage to avoid panic measures even when their reserves seem to be melting away to nothing, they are likely to keep control of the situation. But bankers are human, and absolute security appears to be unobtainable so long as the legal medium of payment is something of which the supply is limited, or nearly limited, and cannot be increased at will under the stress of a crisis. The introduction into a credit system of a stable standard of value is a very equivocal improvement if it means that an inflation of credit is going to produce a panic and a long list of failures, instead of a depreciation of the unit of value.

It may be retorted that the danger of a crisis arises only from the assumed absolute limitation of the supply of gold, and that though the fresh supply to be obtained from the mines at short notice is negligible in proportion to the stock already in existence, there may be large stocks available in foreign countries. The extent to which foreign stocks can be drawn upon is a matter of importance, which we shall have to investigate presently. But before we can usefully consider it, we must turn to another expedient by which it is possible to make good a shortage in the supply of money.

CHAPTER III.

PAPER MONEY AND THE QUANTITY THEORY.

In Chapter I. it was shown that credit, in the form of a banker's obligation, would supply society with a medium of payment, but not with a stable standard of value. In Chapter II. we have just shown that the use of a commodity, gold, as a standard of value gives rise to a new set of problems. The natural practice of the banker is to grant credits to his customers without demur at the highest rate of interest he can get, short of deterring them from borrowing. But so long as the rate of interest is not deterrent—so long, that is, as it does not exceed the rate of profit likely to be made from the use of the sums borrowed—there is an inherent tendency on the part of traders to borrow more and more, and of bankers to lend more and more. This tendency works just as freely as if the stabilising influence of the gold standard were not present, *until* the demand for cash for circulation occasions an actual shortage in the banks' gold reserves. And even when this happens the gold standard does not remedy the situation automatically; it can only act as a warning to the bankers that they must take some positive action to restrict credit. If they fail to do so, or if the action they take is not effective, they may be brought up short by finding their vaults completely denuded of cash.

In such an event, what is then the remedy? What is wanted is some medium the supply of which can be increased, if need be, *at will*. This medium is found in paper money. It is enacted by law that a paper document, designed like a bank note to defy the ingenuity of the forger, shall be legal tender for the discharge of a debt.

Paper money resembles bank notes in appearance, and in being a medium of payment of no intrinsic value, which passes from hand to hand without any other formality than delivery. The two must, however, be carefully distinguished. In principle the difference between them is clear. A bank note is *evidence* of a credit with a banker. Its value arises solely from the banker's obligation, of which it is, as it were, the title-deed. If the banker fails, the note ceases to be worth its face value; unless specially secured, it will only entitle the holder to share in the banker's assets, along with the other creditors. Paper money, on the other hand, derives its value from being legal tender. The debtor has the right to pay it, and the creditor is bound to accept it. Unless (as occasionally happens) the law is allowed to become inoperative, the paper money cannot fail to circulate at par. But this means at par with the *money of account*, not with any physical standard of value such as gold or silver.

Thus a bank note *represents* credit; a legal tender note is *itself* money. In its application, nevertheless, the distinction between them becomes uncertain. While there are plenty of instances (like the present British currency notes) of indisputable paper money, there are many others where notes which have been issued as evidence of bank credits have been made legal tender. Is it in that case the document, or the credit which it represents, that is really the legal means of payment? The credit and the document are so inseparably connected that it is often impossible to say. The Bank of England note is legal tender in all payments above £5. Till the passing of the Gold Standard Act, 1925, it was so only so long as the bank redeemed its notes on demand in legal coin. Here it seems clear that it was the bank's obligation to pay that was legal tender. Yet the same obligation, if represented not by a promissory note, but by a deposit, was not legal tender.

And if a bank with the privilege of issuing legal tender notes is allowed to suspend payments in cash, is it still the bank's obligation that is legal tender, or is it the paper?

For practical purposes it is not necessary to settle these difficulties, which are largely matters of legal definition. The important distinction is between notes which are legal tender and notes which are not. If the delivery of the document secures the final discharge of a debt, the question whether it is the document itself or the credit that it represents to which this virtue belongs can be left unanswered.[1]

Paper money is usually used to supplement a metallic standard. Either it is convertible on demand into the standard metal, or it circulates alongside gold or silver money, and as both paper and coin can be used at the debtor's choice to discharge a debt, both paper and coin have the same value in terms of the money of account.

But it sometimes happens that there is so much inconvertible paper money in circulation that no debtor ever need use coin to pay a debt. In that case, anyone who wants coin can no longer rely on getting it by selling commodities or securities or by calling up debts. These expedients will only produce paper, and if he wants coin he must buy it as a commodity, and perhaps pay extra for it.

If the values of paper and coin are thus divorced, what determines the wealth value or purchasing power of paper? Where a commodity such as gold is adopted as a standard, it is easy to see that the value of the monetary unit must be equal to the value of gold as a commodity. But where the only money is paper inconvertible into anything of intrinsic value, there is no such simple answer to the question.

It is sometimes maintained that no paper money can have any value except in virtue of some expectation of its ultimate convertibility into coin. Indeed, inconvertible paper is often a relic of a pre-existing convertible issue, the issuing Government having failed to maintain the convertibility of the notes. If they are at a discount, as compared with their nominal value in coin, this discount, it is contended, measures the distrust of the credit of the Government, which has in any case broken its engagements in making the notes inconvertible. According to this view, their immediate convertibility on demand has been replaced, as in the case of a bank which has suspended payment, by a contingent and remote convertibility at some future date, when the public finances permit, and people accept the notes in discharge of debts on the strength of this contingent and remote convertibility, but only at a value which allows for the indefinite postponement of its accomplishment. It may be admitted at once that future convertibility into coin is sometimes a factor in determining the value of paper money which is for the time being inconvertible. But that does not mean that this is an explanation of universal or even of general application. Not only are there many cases where there is practically no expectation of future convertibility, but even where this expectation does exist it probably plays a much less important part in fixing the value of the paper money than the fundamental quality of being legal tender. In fact, there is a demand for the means of payment *as such*, and this demand gives a value to whatever is established by law or custom as the means of payment, quite apart from any value it may possess for any other purpose. Gold itself derives part of its value from the demand for it as a means of payment.

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[1] It even happens sometimes that notes which have ceased to be convertible continue to be used as a means of payment without being legal tender. They are practically paper money, though only a "customary tender."

If an issue of paper money derives a value in the market from the prospect of its ultimately becoming convertible into coin, and if this value is *greater* than its value as the means of payment, it will be acquired and held by speculators who wish to profit by its convertibility when the time comes. But this is an exceptional case of quite subsidiary importance in comparison with the general question of the determination of the value of the legal means of payment. To answer this question we must discover in what manner the value of a legal tender currency without intrinsic value, and unsupported by convertibility into anything of intrinsic value, is determined.

The same problem really arises in the case of the hypothetical country assumed in Chapter I., which had no money and used credit as the sole medium of exchange. There the unit of value was something entirely arbitrary, a mere arithmetical abstraction. In all the transactions into which the unit of value enters, what requires to be measured is the *proportion* which the value of some commodity, service, right, or debt bears to some other. To measure that proportion, it is convenient to express each value as a number, but the choice of a unit as the basis of these numbers is as non-essential as the choice of a language in which the bargains are to be concluded. In the economic life of the community the proportions to be measured are of the substance, while the unit in which they are measured is of the form only. This being so, if the whole of the economic fabric of society and all the transactions be supposed given, to fix the numerical measure of one value is to determine the unit, and therefore to fix the numerical measures of all.

Now one of the quantities which are measurable in terms of the unit of value is the aggregate of all the bank credits outstanding. This aggregate, which, under our hypothesis that no money is used, is of course the same as the aggregate of unspent purchasing power in circulation, may conveniently be called the " unspent margin." It can be arrived at either by adding up the liabilities of all the banks, or by adding up the credits held by all their customers, whether depositors or note holders. For to ascertain the total of a number of debts we can obtain the particulars either from the accounts of the debtors or from those of the creditors. Let the unit of value be settled, and the numerical measure of the unspent margin is determined. Conversely, if the number of units of value in the unspent margin is settled, the unit of value is thereby determined, and the determination of the unit of value determines all the other quantities, such as the prices of commodities and services, which are measured by it. Thus we see that, given all the economic conditions, the prices of commodities are directly proportional to the number of units of value contained in the unspent margin of purchasing power.

The wealth value of the unit is therefore *inversely* proportional to the unspent margin. Here we have in its simplest form what is called the Quantity Theory of money.

Suppose now that money is used. The theory remains unaffected. The unspent margin includes not only the total of bank credits, but also the total of money in circulation (outside the banks). It is still true that given all the other economic conditions, the price level is proportional to the unspent margin. And if among the given economic conditions is the proportion of credit to money in the unspent margin, it is equally true that the price level is proportional to the quantity of *money* in circulation. This is an alternative (and older) form of the Quantity Theory, but is inferior to the other, in that it involves one more assumption, viz. that the proportion of credit to money in the unspent margin is given.

In the case of a *gold* currency or a paper currency maintained at a fixed gold value, one of the given conditions must be that the value of gold as currency is equal to its value as a commodity, and this is sufficient to determine all the other values. In the case of a paper currency with no fixed value in terms of gold or any other commodity, the Quantity Theory shows how the value of the unit is determined ; it is inversely proportional to the quantity in circulation.

The theory equates the unspent margin, which is a total of monetary units, to the command over wealth which the people choose to keep in hand in immediately available form. It equates, in fact, a total of monetary units to a total of wealth, and so determines the value of the monetary unit in terms of wealth. But the total of wealth is a *potential* not an actual total. It depends on people's expectations of the wealth value of the unit, and their expectations are governed (in the main) by the prices which rule in the market.

We must beware of reading more into the Quantity Theory than it really says. It does not say that if the number of units of value in circulation *changes*, the prices of commodities will change in exact proportion. A change in the unit of value is likely to cause a number of other changes (some of which we examined in Chapter I.), so that the economic conditions are no longer all " given." Nor can we assume that prices at two different times will be exactly proportional to the quantities of purchasing power in circulation (though, if economic conditions at the two epochs are very nearly identical, this will be nearly true). All that we have established is that, if *everything* in the economic picture be painted in, save only the numbers to be expressed in terms of the unit of value, then, since the mutual proportions of these numbers are already determined by the economic conditions, the number of units in any one will be directly proportional to the number in any other, and in particular the prices of commodities will be proportional to the number of units of value contained in the unspent margin.

But so long as this principle is subject to the limitation that *all* other economic conditions must be given, it is necessarily sterile. And attempts have been made to devise modified forms of the quantity theory, which can be applied to changing conditions without this qualification.

Perhaps the best-known of these is Professor Irving Fisher's Equation of Exchange.

Over any period the total quantity of means of payment (the unspent margin), multiplied by the average number of times every unit of money or credit has changed hands in the course of business, must necessarily be equal to the total value of all transactions in which credit or money has passed The total *value* of transactions may be regarded as the product of the price level and the total *volume* of transactions, the volume being the quantity of wealth passing in all the transactions. The measurement of the volume of transactions is the same problem that we have already had to deal with in arriving at an index number of the price level or of the wealth value of a currency unit. We cannot find a unit of wealth in terms of which to compute the volume of transactions, but we can compare the volume of transactions in one period with that in another.

If we call the number of times a unit of money or credit changes hands in a unit of time the velocity of circulation, we may say that the price level varies directly as the unspent margin and the velocity of circulation, and inversely as the volume of transactions.

Here we seem to have a formula which takes account of all relevant changes in conditions, and which can dispense with the proviso that all other conditions must be given. On investigation, however, the formula proves to be subject to fatal defects.

The "transactions" in which money passes include not only sales of goods and services, which contribute to form the price level, but dealings in credit instruments and rights to receive money. When a purely *pecuniary* right, such as a bill of exchange, or a bond or debenture, is sold for money, the transaction throws no light on the purchasing power of money; it merely expresses an equivalence between money at one time and on one set of conditions, and money at another time and on another set of conditions.

Professor Fisher bravely grasps the nettle, and expressly includes such transactions in his formula. He defends this course on the ground that the sale of a pecuniary right, such as a bill or bond or debenture, can be treated as a transaction which is prevented by a contractual obligation from responding to a change in the price level, very much on the same footing as fees or salaries that are prevented from changing by contract, custom or law.

But the parallel is a false one. Fees and salaries are paid for services rendered; they are payments of *money for things*. The purchase of a pecuniary right is a payment of *money for money*. Both items in the exchange are affected in the same way by changes in the value of money.

The absurdity of the inclusion of such transactions is thrown into relief as soon as we start calculating the volume of transactions. How are we to measure the "volume," as distinguished from the value, of the transactions in bills or bonds? Suppose that there has been a big rise, say, 50 per cent., in the price level, and suppose that there has been no change in the volume of goods financed with bills of exchange. The total value of the bills will have risen by 50 per cent. Professor Fisher would regard this as an increase in the *volume* of bills (subject to any such change in the price of a bill as may arise from variations in the rate of discount).[1]

These criticisms apply equally to long-dated securities, such as company debentures, mortgages and national and municipal debts. They are rights to receive money, and dealings in them do not reflect changes in the wealth value of money. Shares, on the other hand, being rights to participate in the profits derived from capital goods, do have a significant price, and if the shares dealt in at two different dates could be made really comparable, they might legitimately enter into an index number of prices.

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[1] If the rate of discount has risen from 3 to 4 per cent. the price of a three months' bill for £1000 will have fallen from £992 10s. to £990.

Professor Kemmerer and Professor Fisher estimate the dealings in Stock Exchange securities in America at 8 per cent. of the total of all transactions, and they treat the remaining 92 per cent. as dealings in commodities and services. If that proportion were correct, the inclusion of dealings in securities (though, so far as it goes, a source of error) would not affect the result very seriously.

But they seem to have made quite insufficient allowance for the large sums which pass in the making and repaying of loans from day to day or for short periods, and in the discounting, re-discounting and paying off of bills of exchange and promissory notes.

These objections could be avoided by the substitution in the formula, for the velocity of circulation as defined by Professor Fisher, of what Professor Pigou [1] calls the "trade-velocity of money," that is to say, the number of times a representative unit of money changes hands in a year against commodities and services coming into being during that year. The transactions would be confined to transactions in these commodities and services.

But the index number of prices so arrived at would still be an unsatisfactory one. Commodities would be weighted not according to the amounts produced or the amounts consumed, but according to the amounts dealt in for money. A commodity which is dealt in in a very active market, changing hands often before being finally disposed of, would be over-weighted, provided it is always paid for. On the other hand, speculative dealings carried on on credit, and settled by the payment of small net balances, would count only to the extent of those balances. Materials also would be over-weighted in comparison with manufactured goods, in that they would be counted when dealt in as materials, and again when included in the value of the finished articles.

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[1] *Industrial Fluctuations*, pp. 152-3.

Professor Pigou has devised a form of the quantity theory which takes account of the contingent circumstances in a different way.[1]

The quantity theory relates the unspent margin as a total of monetary units to its equivalent in wealth. If we suppose wealth to be reckoned in units, the number of such units in the unspent margin will be equal to the number of monetary units composing it, divided by a price index representing the value in monetary units of a unit of wealth.

Then if the wealth value of the unspent margin remains unchanged, the price index will vary precisely in proportion to the unspent margin. And if the price level does not vary precisely in proportion, that is because the wealth value of the unspent margin changes.

Thus the proviso that " other things remain unchanged " is reduced to mean that " the wealth value of the unspent margin remains unchanged." Substantially the same formula has been adopted by Mr. Keynes.[2] Professor Pigou expresses the wealth value of the unspent margin as the *proportion of their total resources* that people keep in liquid form. Mr. Keynes simplifies the formula by dropping out the reference to total resources.

Professor Pigou claims that his formula is superior to that of Professor Irving Fisher, based on velocity of circulation, in that " it brings us at once into relation with volition—an ultimate cause of demand—rather than with something that seems at first sight accidental, arbitrary and more or less in the air." [3] It is true, indeed, that the wealth value of a man's cash holding has real significance for him, while velocity of circulation is not a phenomenon which enters directly into anyone's experience. But still it is not the case that people settle their cash holdings with *direct* reference to their purchasing power in terms of wealth. They do not take express account of any index number relating their cash to its equivalent in products.

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[1] See his article in the *Quarterly Journal of Economics* for Nov., 1917, reprinted in his *Essays in Applied Economics*.

[2] *Tract on Monetary Reform*, chap. iii. (I.).

[3] *Essays in Applied Economics*, p. 178.

It is often contended that the different versions of the quantity theory are merely different ways of stating identically the same thing. That is not so. They involve different interpretations of the meaning of "price level," and their relative merits depend to a considerable extent on the different index numbers they implicitly employ.

Only the purely *static* quantity theory needs no index number, for its comparisons assume relative prices to be unchanged *inter se.* The objections to Professor Fisher's Equation of Exchange arise mainly from the faults of the price index implied in it. The formulas of Professor Pigou and Mr. Keynes involve comparisons of the wealth value of the unspent margin at different times. In such comparisons a price index is an essential factor, but they leave the index undetermined.

Mr. Keynes suggests that the individual in settling his cash balance would take account of the cost of living. But in reality every one settles what margin of unspent purchasing power he shall keep by reference to his prospective receipts and payments in monetary units. The wealth value of the units is not itself part of the calculation.

CHAPTER IV.

CONSUMERS' INCOME AND CONSUMERS' OUTLAY.

BEFORE we can make practical use of the quantity theory, we must see which of the economic conditions are really relevant to the determination of the value of the unit.

From the point of view of the individual, there are three principal purposes for which reserves of purchasing power have to be kept.

First, income and expenditure do not exactly keep pace. In the case of the weekly wage-earner they very nearly do keep pace; but even he gets occasional windfalls in the shape of overtime earnings, or other exceptional receipts, and suffers occasional interruptions of earning power from illness and unemployment; and from time to time he incurs extra expenditure on furniture, clothes, holidays, etc. The well-to-do man receives his income at longer and sometimes at more irregular intervals; he may have a fixed salary or dividends paid quarterly, or he may be earning professional fees in variable amounts and at variable times. Every one tends to have a good deal of money in hand just before a large item of expenditure becomes due, or just after receiving a large item of income.

Secondly, every one endeavours to keep a supply of money in hand to meet an unforeseen emergency. It is impossible to anticipate all the different occasions for expenditure that may arise, and therefore the prudent man so regulates his balances of cash or credit that at those times (immediately after large disbursements or before large receipts) when the balances are lowest he still has something in hand.

Thirdly, the man who is saving cannot be perpetually investing his savings in driblets. He lets his balances accumulate until he can spare some considerable sum; he then invests all he can without unduly depleting his balances, and starts saving again. The procedure is the same in the case of the working man who periodically puts two or three pounds in the savings bank; in the case of the professional man who every now and then invests a hundred or two; or in the case of the rich man, whose savings are reckoned in thousands.

The problem of regulating balances is somewhat different for a trader's business. It is a normal practice in the case of such a business to borrow for short periods, and this makes possible a much nicer calculation of balances than in the case of an individual. A balance of cash or credit is in itself a source of loss, since, except in the case of a deposit subject to notice, it is earning no interest, and even a deposit subject to notice earns interest at less than the full rate. By borrowing to meet large disbursements and applying large receipts in repayment of borrowings, a business concern can reduce this loss of interest to a minimum. Its power of borrowing also enables it to be ready for an unforeseen emergency without perpetually keeping a stock of money on hand for the purpose.

As to the distribution of the unspent margin of purchasing power between cash and credit, we have already seen that the man rich enough to have a banking account will keep the bulk of his reserve balance in credit, and only an unimportant sum of pocket-money in cash. The poor man keeps all his reserve balance in cash, except in so far as he puts it in the savings bank, and a deposit in a savings bank is rather an investment than a part of the unspent margin. For a business, balances are kept in the form of credit, but the manufacturer has constantly to draw out large sums of cash to pay wages, and the retailer, the railway, tram or omnibus company, the collector of working-class rents, the theatre manager, and others whose receipts are mainly in cash, are continually paying cash into the banks. The banks themselves keep reserves of cash sufficient in proportion to their liabilities to meet their customers' demands.

For each private individual the appropriate balance of credit and the appropriate balance of cash will bear a determinate proportion to his income (not, of course, the same proportion for different individuals, or for the same individual at different times). For each business the appropriate balances will likewise be determined by convenience, but will be proportional rather to the gross transactions or turnover than to the net income of the business. Traders, however, can regulate their balances more closely. Consequently their balances bear a smaller proportion to their turnover than those of private individuals to their incomes. In all cases alike the balances of purchasing power kept in reserve are settled with a view to the transactions to be financed.

The requirements of the community for reserves of purchasing power may be regarded as constituting the demand for credit and money. The supply of credit emanates from the banks. The supply of money is determined by the legal and administrative arrangements for regulating the coinage and the issue of legal tender paper. But here again the banks intervene, for it is only such part of the available stock of money as is in the hands of the public that forms part of the unspent margin of purchasing power. The money which forms the reserves of the banks is excluded from the unspent margin, though of course it is part of the assets held by the banks against the credits which compose their liabilities, and these credits are part of the unspent margin. The unspent margin in fact is equal to the money in circulation, *plus* the obligations of the banks. These obligations are equal to the assets of the banks, *less* their capital. The amount of credit rises and falls with the assets of the banks, and these assets are composed of two parts—interest-bearing assets, such as loans, discounts, and investments, and cash reserves. If the cash reserves are increased by a return of money from circulation into the banks, or if they are diminished by the withdrawal of money from the banks into circulation, the unspent margin is unaffected; all that happens is that so much cash is turned into credit, or so much credit into cash. But if the banks increase or decrease their loans or advances, the unspent margin is increased or decreased by the same amount. Now the banks undertake to transform cash into credit and credit into cash at the choice of their customers; they themselves claim no say in the matter. The choice of their customers as between cash and credit proceeds, as we have seen, from the economic conditions, being determined entirely by the convenience of the individual. The public cannot be compelled arbitrarily to increase or decrease their holdings of cash; they can only be induced to do so by modifying the economic conditions. If the quantity of money is increased or diminished, the result, in the first instance, is merely to increase or diminish the cash reserves of the banks, and it rests with the banks to decide whether they shall make any change in their other assets or in their demand liabilities.

Changes therefore in the unspent margin depend upon the action of the banks in creating more or less credit. Having chosen a purely static form of the quantity theory, we have now to discover how the wealth value of the monetary unit is determined under changing conditions.

We have already examined two particular cases of this general question. We have seen in Chapter I. how the value of the monetary unit might vary without limit, if credit were the sole medium of payment and money did not exist. With a gold currency, limited in amount, we have seen in Chapter II. how an expansion of credit might exhaust the available stocks of cash and precipitate a crisis. Now that we have introduced paper money into the problem, we are in a position to attack the general question.

We have just shown that it rests with the banks to increase or decrease the unspent margin of purchasing power. The unspent margin is equal to the cash in circulation, *plus* the assets of the banks, *less* their capital. The assets of the banks are equal to their cash reserves, *plus* the amount of their other assets, such as loans and investments. Consequently the unspent margin is equal to all the cash, whether in circulation or in the banks, *plus* the net interest-bearing assets of the banks.[1] Assume for the present that the cash remains unaltered. In that case the unspent margin can only be increased or decreased by an increase or decrease in the net interest-bearing assets of the banks. In other words, there must be an acceleration or retardation of that process which we have called the creation of credit, the exchange of immediate obligations from the banks to the traders, for obligations at future dates from the traders to the banks.

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[1] The assets held against their capital being excluded.

Let such an acceleration or retardation of the creation of credit occur. What will be its effects? The first thing that requires to be said about it is that no one borrows money in order to keep it idle. The borrowing is done by people in business, who have deliberately relied on borrowing in order at other times to avoid keeping large idle balances. It follows that practically all the sums borrowed will be quickly paid away. Some may be paid away from one trader to another in exchange for goods, and the vendor may apply the money which he receives to paying off an existing debt. But this is not really the creation of new credit at all; it is simply the substitution of one trader's debt for another among the banks' assets. Apart from this shuffling of debts, all the credit created is created for the purpose of being paid away in the form of profits, wages, salaries, interest, rents—in fact, to provide the incomes of all who contribute, by their services or their property, to the process of production. It is for the expenses of production that people borrow, and it is of these payments that the expenses of production consist. So we reach the conclusion that an acceleration or retardation of the creation of credit[1] means an equal increase or decrease in people's incomes.

An increase or decrease in people's incomes will lead to an increase or decrease in their expenditures. The income and expenditure now in question are, of course, *money* income and *money* expenditure, that is to say, the number of monetary units (whether in credit or in money) received or spent. With *real* income, or actual command over wealth per unit of time, we are not directly concerned.

Only true income and final expenditure are to be counted;

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[1] We are speaking here, of course, of the amount of credit created *per unit of time.*

expenditure on the production or purchase of goods for subsequent sale is to be excluded. The income is to be what a man has available to spend on his own needs ; the expenditure is to be what he so spends. They may conveniently be called the " consumers' income " and the " consumers' outlay," though it must be understood that " consumer " includes " investor," for investment is one of the purposes on which income may be spent.

The receipts and disbursements of the trader, who buys or produces with a view to sale, may be called the " trader's turnover," to distinguish them from the consumers' income and the consumers' outlay. The trader, of course, gets his true income out of the profits of his business, and this figures in the total of the consumers' income.

At any moment the precise amount of a trader's income is uncertain. He is buying or producing goods at a determinate cost, and is selling them at a determinate price. But on the one hand, when he holds goods in stock or buys forward, he does not know at what prices he will be able to sell, and on the other, when he sells forward, he does not know at what prices he will be able to buy or to produce. Nevertheless, the amount he takes out of the business for his personal expenditure is definite enough ; it is likely to be governed by what he believes to be the true income derived from the business. He may elect to take out either less or more than the true income. And his estimate of the income may be wrong. If what he takes out is less than the true income, the balance represents an addition to the capital of the business ; it is an application of a part of the consumer's outlay to investment. If it is greater than the true income, the balance represents a diversion of capital assets to consumption ; not being expenditure out of income, it is not a part of the consumer's outlay.

If the creation of credit is accelerated or retarded, the consumers' income is increased or diminished. The consumers' outlay will also be increased or diminished, but not necessarily by an equal amount. The difference between the consumers' income and the consumers' outlay will represent a change in the unspent margin. If a man spends less than he receives, his balance of credit or money will be increased by just that amount.

The unspent margin consists of two portions, the traders' balances and the consumers' balances. The traders' balances, being closely regulated, will not at first be greatly affected by a change in the rate of fabrication of new credit, for a sum which is perceptible in proportion to the consumer's income may be negligible in comparison with the traders' turnover. The extent to which the consumers' balances are affected will depend on the action of the individuals concerned. A man whose income is altered over a period of time might make an exactly equal alteration in his expenditure, or might make no alteration at all. In the former alternative no change would be made in his balances, in the latter the whole change of his income would be absorbed in them. In practice his course of conduct will lie somewhere between these two extremes. A temporary accession of income will be accompanied by a less increase of expenditure (which, it must be remembered, includes investment). A temporary shrinkage of income will be accompanied by a less reduction of expenditure. Balances will be in the first case somewhat increased, in the second somewhat diminished.

The presumption is, however, that the change in balances will at first be relatively small. Where there is an accession of income, the thrifty man will tend to invest his windfall, the unthrifty to spend it. An apparently temporary increase in earnings does not require a reconsideration of the balance to be kept in cash or at the bank, and such increase as occurs is largely casual. Where there is a reduction of income, the prudent man, at any rate, will try to make an equal reduction of expenditure as soon as he can, though it is probably true that adversity reduces balances more quickly than prosperity increases them.

Speaking, for the sake of simplicity, of an acceleration of credit creation only, we see then that the extra credit created in any period, *less* the amount added to traders' balances, is paid away as an addition to the consumers' income for that period. This addition to income is applied to a small extent to increasing the consumers' balances, and to a much larger extent to swelling the consumers' outlay for the period. The consumers' outlay represents the demand for goods and services. If it is increased, that means that more goods and services are sold. The sale of material goods swells the receipts of the retailers and others who sell to the consumer, and encroaches upon their stocks. Like other traders, they are unwilling to hold idle balances, and their additional receipts (*less* so much as is profit, and passes into their private accounts) are applied either to paying off indebtedness or to buying fresh stocks of goods. In the latter alternative the dealers from whom they buy will probably pay off loans, so that it may be taken as broadly true that this part of the consumers' outlay is applied to paying off indebtedness. Therefore the effect of an acceleration of credit creation is likely to be very largely offset by the consequent increase in the consumers' outlay and by the discharge of indebtedness on the part of the dealers from whom the consumers buy.

A portion of the consumers' outlay will, no doubt, be spent on personal services.[1] There can be no accumulated stocks of personal services, and those who make their living out of them do not ordinarily borrow for trade purposes. Their receipts are practically all income; a part they retain in balances and the rest they spend. They spend it (like other people) partly on material products and partly on services. What they spend on services they pay *to one another;* what they spend on material products goes back to the traders. In fact, the *whole* of the amount added to the consumers' income by the original acceleration of lending is either added to consumers' balances, or spent on material products. On their way to this ultimate destination portions may pass from hand to hand in payment for services rendered, thereby adding further to the consumers' income and the consumers' outlay. But the credit cannot be extinguished till it comes into the hands of some one who will apply it in repayment of indebtedness to a bank.[1]

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[1] Cf. *Money*, by Messrs. Foster and Catchings, pp. 283-4.

At a given level of prices the increase in the consumers' outlay means an increase in the consumption of goods. How is this increased consumption to be provided for ? Up to now we have supposed the creation of credit to be accelerated, without inquiring why or how. The creation of credit is in the hands of the banks, and if they want traders to borrow more they must encourage them to do so. Traders borrow to purchase and hold stocks of goods or securities, and bankers encourage them to increase these stocks, and so to increase their borrowing, by lowering the rate of interest. But in so far as the effect of the increased borrowing is to swell the consumers' outlay, the stocks of goods and securities in the dealers' hands are depleted, and further orders have to be given to the producers to replenish them. These further orders need further loans to finance them ; as output expands, credit expands, and with it the consumers' income and the consumers' outlay. Now output cannot be increased without limit, and as the demand for fresh goods presses against the productive resources of the community, prices rise. Retail prices rise because stocks are being depleted and cannot be quickly replenished ; wholesale prices rise because producers are besieged with orders that they cannot fulfil. As prices rise, the quantity of credit needed to finance a given consignment of goods increases in proportion, and the creation of credit is still further accelerated.

The traders' turnover will be increased in proportion jointly to the increase in production and to the rise in the price level, and traders' balances will tend to increase in the same proportion.

If industry is employed up to capacity, the credit expansion is felt mainly in a rise of prices. On the other hand, if there is a considerable margin of productive power unemployed, the main effect will be to increase production. If all producers were employed below capacity to the same proportional extent, there might be for a time no rise of prices at all. But this does not, in practice, occur. Even at times of severe unemployment some industries are active, and some concerns even in the depressed industries are fully employed. Moreover, concerns which are producing below capacity will take orders at a loss so long as there is some margin included for overhead charges. As soon as orders become more plentiful producers become unwilling to quote these artificially low prices. It is likely, therefore, that some rise of prices will occur at an early stage. Nevertheless it is the case that, at a time when industry is under-employed, the rise of prices caused by an expansion of credit is less. The rise of prices and the increase of production are, to a great extent, *alternatives*.

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[1] It should be mentioned that there are in practice plenty of bank loans which are not made to traders to carry stocks of commodities. An accession of income in the hands of any group of people may be applied towards a reduction of their net indebtedness to banks.

The greater the proportion of the additional credit that goes to swell the consumers' outlay, and the less the proportion that is added to balances, the greater will these effects be. A superficial interpretation of the quantity theory would lead us to lay all the stress on balances, and to say that prices ought to increase in proportion to the unspent margin, i.e. to the quantity of credit and money in the hands of the people. But now we see that the more *slowly* this quantity increases, the greater will be the rise of prices, so long as the acceleration of the creation of credit continues. When the process is completed, when the banks no longer seek to encourage borrowers, and the credit created no longer exceeds the credit extinguished, then the unspent margin will again become the measure of prices. If equilibrium supervenes and the economic conditions that existed before the disturbance are approximately reproduced, it will then be approximately true that prices and all money values will have changed in proportion to the quantity of purchasing power (though this is in any case subject to the qualification that some money values are absolutely fixed either for a period or in perpetuity, such as debenture interest, rents, etc., and others are fixed by custom).

An exactly similar analysis applies to a retardation of the creation of credit. Traders borrow less per unit of time from their banks, less is paid away to people engaged in production, and there is a shrinkage in the consumers' income. The shrinkage in the consumers' income is less than the shrinkage in borrowing, because the traders will draw to some extent on balances. There will likewise be a shrinkage in the consumers' outlay, which will be less than the shrinkage in the consumers' income by the amount drawn from consumers' balances. Finally, there will be a shrinkage in the repayments to the banks. Traders find that their sales fall off, and cut down their orders to the producers for fresh supplies. Production diminishes and with it the incomes of the producers. Thereby a further reduction is made in the consumers' income, the consumers' outlay and the traders' sales. Producers quote lower prices because they are incompletely employed. Dealers quote lower prices in order to unload their stocks.

Here, also, there is a transitional interval when the price level ceases to correspond with the unspent margin. The more slowly the unspent margin decreases, the greater will be the fall of prices, because the consumers' outlay will more nearly keep pace with the decline in the consumers' income.

With a given volume of consumption (including investment) the price level is proportional to the consumers' outlay. When it fails to vary in exact proportion, that means that the volume of consumption changes, either because stocks of goods are added to or drawn upon, or because production is increased or diminished.

The possible sales are limited to the amount of the consumers' outlay. Dealers may sell goods at prices below replacement value. Thereby they sell more goods, but they do not receive more cash. If some receive more cash, others receive less, unless the consumers' outlay itself is increased. A fall of prices *might* tempt consumers to deplete their balances in order to seize the opportunity to buy cheap, but that will only occur if they expect prices to rise again.

Traders, finding that they cannot sell enough goods to repay their indebtedness as fast as they would wish, may apply a part of their own profits to this purpose. A trader's profits are part of the consumers' income, and their application in this manner is part of the consumers' outlay. The profits are spent on an *investment*, an extension of the working capital of the business. A part of the trader's stock-in-trade becomes his unencumbered property, instead of being actually or implicitly pledged to his banker. It is as if he had bought the goods from himself and used the proceeds to pay off the debt, though he has bought them not to consume but to hold. If he had not devoted his profits to this purpose, they would have contributed as part of the consumers' outlay to the demand for things in general, and the traders supplying this demand would have been able to pay off an equivalent amount of indebtedness. Thus the use of profits to pay off indebtedness does not make an exception to the general principle that the extent to which indebtedness can be extinguished is limited to the amount of the consumers' outlay.

To make this rather intricate part of the subject clear it will be well to sum up the results at which we have just arrived.[1] The consumers' income rises and falls with the amount of new credit created; the consumers' outlay with the consumers' income; the credit extinguished with the consumers' outlay. But the changes in these several quantities do not *exactly* keep pace. The difference between any two of them represents a change in balances. The change in the unspent margin is the resultant of the changes in consumers' balances and in traders' balances.

Money is borrowed for production, and a change in the rate of creation of new credit is in the first instance a sign of a corresponding change in the rate of production of wealth. But output cannot be increased, and will not be decreased, indefinitely. An increase or decrease in the orders to producers is quickly reflected in an increase or decrease of wholesale prices.

The consumers' outlay in being applied to the extinction of traders' indebtedness produces a depletion of traders' stocks.

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[1] See also the note at the end of this Chapter for a statement of these results in algebraic notation.

The volume of new orders to the producers rises and falls with the rate of depletion of these stocks, and the amount of new credit created rises and falls with the volume of new orders *and* the general level of prices. Thus is the cycle completed.

The banks take measures to expand or contract credit as the case may be. From the point of view of the trader, borrowing is an incident of the process of holding stocks of goods, whether in course of manufacture, or in transit, or awaiting sale. If he is induced to borrow either more or less, this really means that he is induced to hold greater or smaller stocks. But when he takes steps to adjust his stocks and his indebtedness by giving greater or smaller orders, the cycle of changes is started, and the effect on stocks and indebtedness on the whole is limited to the *difference* between the change effected in the amount of credit created at one end and the change in the amount of credit extinguished at the other, after this credit has circulated through the various stages which we have seen. This difference is the amount which is waylaid and left behind in balances. The banker sees the whole process from the point of view of his balance-sheet. He sees the credit expansion or contraction begin in the applications for loans; after a short interval he sees it to a great extent offset by a similar change in the repayment of loans. The change in the bank credits which make up his liabilities is equal to the change in the loans which make up his assets. The choice as to how much of the new credit created shall be kept in balances (whether as money or as credit) and how much spent, rests entirely with his customers.

Up to this point we have not reconsidered our assumption that the stock of money in the community remains unchanged and that the changes in the unspent margin are exclusively in the amount lent by the banks. In other words, we have not yet taken account of the special characteristic of paper money, that the supply of it can be increased or decreased at will. When considering metallic money (Chapter II.), we showed how an expansion of credit causes a withdrawal of money from the banks into circulation, and a contraction causes its return. The use of paper money permits of these variations in circulation being met without causing inconvenient and possibly disastrous fluctuations in the cash holdings of the banks. It facilitates expansions and contractions of credit by removing the limitation which a fixed supply of currency would impose.

Since the amount of the unspent margin is determined by the action of the banks in regard to the creation of credit, and the money in circulation is simply that portion of the unspent margin which people choose to hold in cash, the circulation of money is dependent on the creation of credit. Nevertheless, there is a sense in which the creation of credit is dependent on the circulation of money. A bank must keep a cash reserve equal to a certain proportion of its liabilities in order to be able to supply its customers with whatever money they need. To hold *more* idle cash than is required for that purpose is a loss. Therefore the amount of credit created tends to be that for which the total stock of money, after allowing for the needs of circulation, will be just sufficient to provide the proper reserves.

At a time when the reserves are in the requisite proportion, if the supply of money is diminished, for example, by the withdrawal and cancellation of a certain amount of legal tender paper, the proportion will be disturbed, and the banks, if they are to restore it. must restrict the creation of credit. Such a withdrawal of currency will, in the first instance, affect only the bank reserves, since the customers of the banks draw out just so much cash, within the limits of their credits, as they find convenient, and no more.

Thus the note-issuing authority which regulates the supply of legal tender money is in a position to increase or diminish the reserves of the banks at will. This is in general true, even when the note-issuing authority is a Government defraying its own liabilities with notes fresh from the printing press. The notes, as fast as they are spent by the recipients, will pass into the hands of the banks and swell their reserves.

By playing upon the reserves of the banks, the note-issuing authority can induce an expansion or contraction of credit at will. But in order to do so, it must have at its disposal some machinery for issuing and withdrawing notes easily and promptly. A Government which can only withdraw notes by raising the necessary funds from the public by taxes or loans does not fulfil this condition. The best instrument for the regulation of the supply of paper money is a State Bank or else a Central Bank which, while not itself a part of the Executive Government, is willing regularly to cooperate with it.

If given a monopoly of the issue of legal tender notes, such a bank can regulate the paper currency on banking principles. It will issue notes by way of short-term advances (whether loans or discounts) to traders or to the other banks, and will be continually receiving notes in payment of past advances. By stopping or curtailing fresh advances, the Central Bank can ensure a steady diminution in the note issue. By offering to lend at a low rate of interest and otherwise encouraging borrowers, it can increase the note issue.

The other banks must have adequate supplies of currency, which can, in the last resort, only be obtained from the Central Bank. That gives the Central Bank great power of control over credit. The market rate of interest on short-term advances will always tend to approximate to the rate charged by the Central Bank, the Bank rate as it is called (subject to the necessary allowance for differences in security and liquidity). So long as a bank may have to borrow from the Central Bank in order to accommodate its customers, it cannot afford to lend to them at less than Bank rate. Indeed, it will charge them a rate exceeding Bank rate by the customary margin of profit. And as long as the bank can rely on getting money from the Central Bank, it will not charge more than that rate (provided there is free competition among banks).

If the Central Bank has at any time lent out more money than the other banks really need, the market rate may drop below Bank rate, but the Central Bank can readily force the market rate up again, either by selling marketable securities or by itself borrowing in the market. A diminution of the Central Bank's assets means an equal diminution of its liabilities, which are, from the standpoint of the other banks, cash. As soon as the banks find themselves short of money, they are faced with the prospect of borrowing at Bank rate, and the market rate rises accordingly. By this method the Central Bank, when it raises Bank rate to contract credit, makes Bank rate *effective*. It is the market rate which actually checks borrowing by traders.

If the Central Bank wishes to expand credit, it lowers Bank rate. That enables the other banks to lower the market rates. If traders do not respond as quickly or thoroughly to this stimulus as desired, the Central Bank can start buying securities or bills in the market ; its liabilities increase along with its assets. The banks find themselves with more money in hand than they need, and in their efforts to escape from the loss of holding it idle, they will try to induce traders to borrow.[1]

The Central Bank is amply equipped to be the leader of the credit system. By raising or lowering Bank rate, and by selling or buying securities, it can initiate a contraction or expansion of credit, and can set on foot the sequence of events which we have analysed in this chapter.

Upholders of the quantity theory of money have sometimes been led to argue that prices ought to rise and fall regularly with the quantity of money and credit in being. The theory has been as often attacked on the ground that experience shows us many examples of prices rising when the quantity of credit and money falls, and *vice versa*. The arguments on both sides betray a misconception of the theory. It is indeed sometimes the case that, when prices show a marked rise or fall, there is not, at any rate, a proportionate increase or decrease in the bankers' liabilities, whether deposits or note issues. That occurs at one of those transition periods when credit is expanding or contracting.

When credit is expanding and prices are rising, the traders' turnover increases approximately in proportion to prices.

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[1] For a more detailed analysis of the effects of the purchase or sale of securities by the Central Bank upon credit, see my *Monetary Reconstruction* (2nd edition), pp. 140-3.

Traders' balances will, of course, tend to rise in the same proportion. They will, however, be affected at the same time in another way. It has been shown above (pp. 13 and 26) that, when prices are rising, it becomes exceptionally profitable to buy and hold stocks of goods. To keep in hand balances of money that might be spent on the acquisition of goods is to miss this exceptional profit. The disadvantage of holding an idle cash balance is therefore greater than usual, and traders make correspondingly greater efforts to keep down their balances. So long as prices are rising, therefore, traders' balances will not increase in proportion to the traders' turnover.

When credit is contracting and prices are falling, the tendency for traders' balances to diminish in proportion to the traders' turnover will likewise be counteracted by the effect of the movement on profits. A fall of price is a set-off against the profit to be derived from buying and holding commodities, and may even turn the profit into a loss. The disadvantage of holding money idle is thereby diminished, and may be completely offset. Traders will see their balances grow with equanimity, because to use the cash in their business would yield them little or no profit. It is still true that they will not borrow to create idle balances, but all traders are not always borrowers,[1] and the low level of profits will be reflected in a low rate of interest, so that even those who are borrowers will make no special effort to hasten repayment.

As soon as prices have stopped rising or falling, as the case may be, the traders' motive to keep balances below or above their usual proportion to turnover ceases to operate. Their borrowing and their expenditure will then be so adjusted as to restore the proportion.

This tendency of traders to pay away balances when prices are rising and to increase them when prices are falling, exaggerates the consequences of an expansion or contraction of credit, and so accentuates the inherent instability of credit.

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[1] Some, especially among big producers, make their independence of bankers' loans a source of pride. When business is slack they may accumulate very large balances.

It is only at times of equilibrium, when the quantity of credit and money in circulation is neither increasing nor decreasing, that the relation of prices and money values to that quantity of credit and money is determined by the individual's considered choice of the balance of purchasing power appropriate to his income. At all other times one of the most important of the economic conditions which the quantity theory takes to be " given " will be an acceleration or retardation in the creation of credit. In practice it seldom, perhaps never, happens that a state of equilibrium is actually reached. A period of expanding or contracting credit, when it comes to an end, leaves behind it a legacy of adjustments, and before these are half completed a new movement has probably already set in. Therefore when drawing guidance from the quantity theory in the examination of actual conditions, we must beware of assuming too easily that, in a country where economic organisation has remained substantially unchanged, prices will go up and down in strict proportion to the quantity of the means of payment in circulation. Before making any such assumption, we must first ascertain whether credit is expanding or contracting.

With due caution and with the proper qualifications, it is legitimate to infer a rise or fall in prices from an increase or decrease in the quantity of the means of payment, and in general the price movement is actually *more* than in proportion to the change in the quantity of the means of payment.

But in extreme cases the effect on balances may be so marked that a rise of prices is accompanied by a decrease in the unspent margin, or a fall by an increase. A violent restriction of credit occasions such a discouragement of enterprise that the unspent margin actually increases. This may occur either because consumers hold money idle, so that the consumers' outlay falls short of the consumers' income, or (a more likely case) because traders hold the proceeds of sales idle. The greater part of traders' sales are to one another at various intermediate stages before the products reach the consumer. The money borrowed by some may stagnate in the balances of others before it is ever applied to the cost of production of new goods. While the money is thus held up it does not enter into the consumers' income, but merely takes the place of goods in the working capital of the traders concerned. The shortage of the consumers' income carries with it a shortage of the consumers' outlay. Sales to the consumer are correspondingly contracted, and the repayment of traders' indebtedness to the banks is retarded. The banks are encumbered with "frozen" loans, but the consequent increase in the unspent margin does not give rise to activity, because the buying power is waylaid in stagnant balances.

The same principle can also be illustrated in the contrary case, where an expansion of credit so stimulates demand and raises prices that money is spent from balances faster than it is borrowed, and the unspent margin actually diminishes. But this only occurs when either traders' balances are, at the outset, somewhat above normal or there is acute distrust of the currency, leading people to cut down balances below the convenient level.

It is not the unspent margin but the consumers' outlay which is the proximate cause in the determination of prices. Demand *is* the consumers' outlay. The importance of the unspent margin arises from the fact that people have direct cognisance of it. It can be statistically measured, and a currency system can be based on its regulation. Rules about the note issue and about the reserves to be held by banks act upon the currency through the unspent margin.

The unspent margin can best be related to the price level through the consumers' outlay. Professor Foster and Mr. Catchings have given the name of "circuit velocity of money" to the ratio of the consumers' outlay to the unspent margin.[1]

The price level is proportional to the consumers' outlay and inversely proportional to the quantity of goods (including capital goods) bought by consumers per unit of time. Consumers' outlay is proportional jointly to the unspent margin and the circuit velocity of money. Consequently the price level varies *directly* as the unspent margin and the circuit velocity, and *inversely* as the quantity of goods bought by consumers.

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[1] See their *Money*, pp. 299-303. Professor Pigou's "income velocity" of money (*Industrial Fluctuations*, p. 152) is nearly the same, but not quite. It is the ratio of the consumers' *income* to the unspent margin. Consumers' income and consumers' outlay are nearly, but not quite, equal.

Here we have a form of the quantity theory which employs a quite definite index number, weighted according to quantities consumed. Our formula is based on wealth *consumed*, not on wealth *produced*. An increase in the consumers' outlay may be met for a time by drawing on stocks of goods instead of by a rise of prices. And a decrease in the consumers' outlay may involve in the first instance an accumulation of stocks instead of a fall of prices. When a tendency to a rise or fall of prices is thus masked by consumption exceeding or falling short of output, there may be said to be a " virtual rise " or a " virtual fall " of prices, a " virtual depreciation " or a " virtual appreciation " of the currency unit.

In general, the first effect of an increase in the consumers' outlay is increased sales from stock, next comes an increase in production, and lastly a rise of prices. But each stage overlaps the one before, so that *some* increase in production and *some* rise in prices may appear almost at the outset.

NOTE TO CHAPTER IV.

THE relations between the rate of creation of credit, the consumers' income and outlay, and the unspent margin are so intricate that some readers will find them easier to understand if algebraic symbols are used.

Suppose a state of monetary equilibrium, in which credit is being created and extinguished at exactly equal rates, and the consumers' income and consumers' outlay are also equal. Let A be the amount of credit created per unit of time, and B the consumers' income. Let M be the unspent margin, and let T and C be the portions of it in the hands of traders and consumers respectively, so that $M = T + C$.

Next let A be increased to $A + a$, and let the consumers' income become $B + b$, the consumers' outlay (hitherto equal to B) $B + b'$, and the credit extinguished (hitherto equal to A) $A + a'$.

If *all* the additional credit a were paid away, the consumers' income would be $B + a$. The difference between a and b is accounted for by the sum which traders borrow but do not pay away, and which is therefore added to their balances. After an interval of time t, the credit created will have been $At + at$. The consumers' receipts will have been $Bt + bt$. Traders' balances will have been raised from T to $T + at - bt$. The consumers' outlay is $B + b'$; in time t they will have spent $Bt + b't$, and their balances will have been increased by $bt - b't$, and will stand at $C + bt - b't$. The traders will have received $Bt + b't$ from the consumers, and will have discharged indebtedness to the amount of $At + a't$. Their balances will have been further increased by $b't - a't$, and will stand at

$$T + at - bt + b't - a't.$$

The consumers' balances are

$$C + bt - b't.$$

Consequently the unspent margin as a whole, being the sum of these two, is

$$C + T + at - a't,$$

or

$$M + at - a't.$$

In fact, as must obviously be the case, the unspent margin is increased by the excess of credit created over credit extinguished.

Next we pass to the consequential changes in production and consumption. We take the production and consumption of wealth each to be equal in the first instance to X. This is a *quantity* of wealth per unit of time (rather an artificial conception, inasmuch as there is no one unit of quantity applicable to all forms of wealth). If P be the average of prices, PX is the money value of X. Now $PX = B$, since all incomes may be assumed to arise from production, whether they are the reward of services or fees paid, by way of interest or rent, for the use of property, and all costs of production are some one's income.

It may be supposed that the increase in credit created from A to $A + a$ is for the purpose of increasing stocks of goods.

Let production be increased from X to $X + x$. Then if prices have not yet risen we have

$$B + b = P(X + x),$$

and

$$b = Px.$$

If the consumers' outlay, $B + b' = P(X + x')$, then $X + x$ represents the quantity of wealth consumed in unit time. In time t

the stocks of goods will have been increased by $(x - x')t$. If S be the original stocks, this will have been raised to $S + xt - x't$. The value of the stocks will have been raised from PS to $PS + Pxt - Px't$ or $PS + bt - b't$.

Traders' indebtedness has increased by $at - a't$, while the value of their stocks has increased by $bt - b't$. The difference $(at - a't) - (bt - b't)$ is the amount by which traders' *balances* have increased.

But presumably production cannot be raised from X to $X + x$ without offering some inducement, in the shape of increased prices, to the producers. If prices rise to $P + p$, then

$$\begin{aligned} B + b &= (P + p)(X + x) \\ B + b' &= (P + p)(X + x') \\ b &= pX + (P + p)x \\ b' &= pX + (P + p)x' \\ b - b' &= (P + p)(x - x'). \end{aligned}$$

Traders increase their borrowing from A to $A + a$ in order to increase their stocks. The actual effect on their stocks is diminished because (1) when they spend an additional amount, b, on production, the expenditure of the people who receive this sum is increased by b', and the net increase in stocks is only to the value of $b - b'$, and (2) the pressure of the additional orders upon the productive resources of the country takes effect only partially in an increase of output from X to $X + x$, and for the rest spends itself in an increase of prices from P to $P + p$. The actual increase in stocks in time t is therefore only $\frac{bt - b't}{P + p}$. If this is small, if b' is not much less than b, and if p is considerable, the desire of traders to increase their stocks is proportionately unsatisfied, and the flow of new orders is proportionately maintained.

But now that prices have been raised to $P + p$, it is necessary to borrow more merely to maintain the old rate of output X. In order to maintain the new rate of output, $X + x$, the rate of creation of new credit must be sufficient to provide expenses of production to the amount of

$$(P + p)(X + x).$$

The increase of prices is immediately due to the pressure of the dealers' demands on the producers, a pressure which will continue so long as the desire of the dealers to obtain additional stocks remains unsatisfied. This desire it is hardly possible to measure by any precise mathematical formula. A fall in the rate of interest or a prospect of rising prices induces traders to add to their stocks; a rise in the rate of interest or a prospect of falling prices induces them to let their stocks run down. In so far as the augmentation of credit spends itself in an increase of prices instead of an increase of production, and in so far as consumption keeps pace with production, the inducement to go on making demands on the producers continues unabated, and may even be stimulated.

The check to this process of expansion of course comes from the banks. The assets of the banks are composed of loans, bills, and investments $= L$, and cash $= R$. If their liabilities be D, then $L + R - D =$ their capital, which we may suppose fixed.

The effect of the increased creation of credit is to raise both L and D by $at - a't$. If F be the amount of legal tender money in the country, of which $F - R$ is in circulation, the unspent margin $M = D + F - R$. This is raised to $D + F - R + at - a't$. But as the unspent margin increases, the portion of it held in the form of money will tend also to increase. Suppose that it increases by h. Then the banks' liabilities are $D + at - a't - h$, and their reserves of cash are $R - h$. Here h is of course less than $at - a't$, and therefore larger liabilities are supported by smaller reserves.

CHAPTER V.

THE FOREIGN EXCHANGES.

We have seen that the medium of payment used in the larger transactions of trade is not money but credit. Credit only requires to be transformed into legal tender money for the payment of wages, or for making small retail purchases, paying railway fares, etc. Though in law a debt is payable in money, in practice all debts of any importance gravitate to the bankers' books, where, instead of being paid in money, they are for the most part set off against one another. The process is a simple one where debtors and creditors are customers of the same bank ; it is a simple one still where debtors and creditors deal with different banks which settle through the same clearing-house. But where debtors and creditors deal with banks in different countries, having different currencies, the mechanism of settlement becomes exceedingly complicated.

Raw materials may be produced in one country, sent for the first stages of manufacture to a second, completed in a third, carried, in the ships of a fourth, to a wholesale dealer in a fifth, and perhaps passed on by him to yet another before the final product reaches the consumer. All the people who have handled the goods, worked upon them, carried them, bought them and sold them, must receive their remuneration or their profit. Their remuneration and their profit must somehow or other be provided from the payments received from the consumer. But every one concerned wants to receive the sum due to him in his own country, where his liabilities are due ; it is no use to anyone to be given a credit in the country where the goods were ultimately sold if he does not live there; before such a credit can meet his needs it must be exchanged for a credit in his own country.

The trader whose business is carried on entirely in his own country finds that he is the debtor of some of his fellow-countrymen and the creditor of others. If he draws cheques in favour of the former and receives cheques drawn in his favour by the latter, all his debts and credits become an affair between himself and his banker, and they are reduced down into a net credit or debit balance. For this simplification it is essential that the debts and credits should be homogeneous; they must be reckoned in the same unit. A debt for forty shillings can be set off against a debt for £2, because a shilling merely means one-twentieth of £1. An undertaking to deliver 100 kilogrammes of gold can be set off against an undertaking to deliver 3215 ozs. Troy, because these are equal weights of the same commodity. But an undertaking to deliver £10,000 in Exchequer Bonds cannot be set off against a debt of £10,000 until the value of a bond in cash has been settled by a bargain between the parties. Nor can 1000 ozs. of gold at Durban be set off against 1000 ozs. of gold in London except by such a bargain. Gold at Durban is not the same thing as gold in London, any more than cotton at New Orleans is the same thing as cotton at Liverpool.

Debts in different countries are as heterogeneous as commodities in different countries; £10,000 in Capetown is something quite different from £10,000 in London. The fact that each is transformable into precisely the same quantity of gold, and that the gold can be sent at moderate expense from either place to the other, does not alter this, though it keeps the variations of the value of either debt in terms of the other within narrow limits. A credit in Capetown is the means of making payments in South Africa; a credit in London is the means of making payments in England. Each credit therefore gives a command over wealth in the region where it is due. This is the real basis of its value; convertibility into gold is merely a device adopted to steady the purchasing power of the monetary unit.

To provide the facilities needed for effecting settlements among traders who have become possessed of credits in different countries, there exists a class of dealers in what is called " foreign exchange." In the foreign exchange market are settled the terms on which credits in one country are to be exchanged for credits in another. The dealers must have establishments in each of the centres at which they deal. A dealer who is not himself a banker will keep a credit balance at some bank at each centre. People who want to remit money—that is to say, to obtain a credit in one of these places in exchange for a credit in another—will pay over the credit into his account at the latter place, and he will pay out the stipulated equivalent from his account at the former. At each centre his balance will be increased or diminished according as the remittances from it are greater or less than the remittances to it. If the exchange dealer is himself a banker, he can *create* credits in favour of those who wish to remit to any centre, and his demand liabilities will be increased or diminished according as the remittances *to* the centre are greater or less than the remittances *from* it.

Whether he is a banker or not, he will be unwilling to let an inequality of remittances continue indefinitely. If he is a banker, a disproportionate growth of his demand liabilities at any centre will involve him in a diminution of his cash and liquid resources at that centre, as soon as his customers use their balances. If he is not, he will not want his credit balances at any of his places of business to be either inconveniently depleted or inconveniently swollen.

Now between any two centres the *demand* for remittances in one direction constitutes the *supply* of the means of remitting in the other. A disparity between them is simply a sign that supply and demand no longer balance. In this as in all other trades, a failure of equilibrium between supply and demand is corrected by an adjustment of price. If the exchange dealers are receiving greater sums than they pay at any centre, they offer less in other centres in exchange for a credit there ; if they are paying greater sums than they receive, they offer more. In other words, in the former case, having too much credit in the centre in question, they make it cheaper in term of foreign currencies ; in the latter, having too little, they make it dearer. When the value of the monetary unit in foreign currencies falls, the exchanges are said to become "unfavourable ;" when it rises, they are said to become "favourable."

It would seem to follow, and in a sense it is true, that the foreign exchanges are determined by the demand and supply for remittances. If as the result of the economic relations between two countries there is an uncovered balance of indebtedness due from one to the other, there will be a demand for remittances from the debtor nation to the other in excess of the demand for remittances in the opposite direction, and the exchange will become unfavourable to it. The whole theory of the foreign exchanges is commonly explained by reference to this fact. In reality, however, it is not an altogether satisfactory account of the matter. In any kind of market movements of price are determined by the state of supply and demand. If prices rise, that is because the supply falls short of the demand ; if they fall, that is because the demand falls short of the supply. The level towards which prices always gravitate is that at which supply and demand are equal. But when we come to examine any particular market, this general law tells us very little about how the equilibrium price is determined. The excess or deficiency of the supply as compared with the demand is merely a *symptom* of a maladjustment of price ; it is no more than evidence that the price is too high or too low. And this is true of the foreign exchange market. If there is an excess of remittances in one direction over remittances in the other, that is a sign that the rate of exchange is not at the equilibrium point, but this does not throw any light on the conditions which determine where the equilibrium point is.

The products on which the consumers' outlay of any country is expended may be divided broadly into two classes, those which do, and those which do not, compete in international markets. They may be called foreign trade products and home trade products respectively. Foreign trade products include not only those which are actually exported or imported, but those which are exportable or importable, and which have an international price.[1]

The line of division between the two classes is not a rigid one. The circumstances which prevent home trade products from being exported or imported are very various, and their efficacy is often only a matter of degree. Some goods are too bulky or heavy in proportion to their value to pay for transport. Yet if they are moved at all from the place of production, the distance over which they are moved is relative, not only to their value at the place of production, but also to their value at the place of consumption. Coal, which is produced cheaply and in great plenty, is of such great value in use that consumers in countries remote from any coalfields will pay freight equal to several times the price at the pit's mouth.

Goods in themselves suitable for international trade may be relegated to the class of home trade products in a remote country with no adequate access to world markets or in a primitive country with no adequate internal communications.

Some commodities are too perishable to bear transport except for short distances. Others only suit the tastes of the community for which they are produced, and cannot be sold elsewhere. But the largest class of home trade products is composed of *services*, which can only be rendered on the spot. Internal transport, medical attendance, education, domestic service, laundrywork, baking are examples.

On the other hand, foreign trade products are not absolutely confined to tangible commodities, which can be physically transported from one place to another. They include some services, such as those of sea transport and many financial operations, which can be rendered internationally.

A material product as finally acquired by the consumer is very often combined of both home trade products and foreign trade products. Foreign trade products are usually to be found at some intermediate stage. Even if they are complete so far as manufacture is concerned, when dealt in in the wholesale markets, the services of a retail dealer, which are in themselves a home trade product, are required to place the goods in the hands of the consumer.

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[1] Imports include materials and partially manufactured goods destined to be used in the production of goods for export. Imports thus destined to be re-exported after a further manufacturing process has been applied to them are not included among the products on which the consumers' outlay is expended.

Where a product is thus of mixed origin, it is still possible to distinguish the elements that go to make up its price.

The prices of home trade products are free to vary in response to any change in effective demand, while the prices of foreign trade products have to preserve a certain relation to world prices. So long as markets work effectively, the wholesale price of any foreign trade product cannot differ from the price of the same product in a foreign country *expressed in the same currency* by more than the cost of transport to or from the foreign country. If the price in the foreign country is to be expressed in the same currency, that must be through the foreign exchange market. The price at home will exceed the price abroad by the cost of transport if the product is one that is being imported from the foreign country, and will fall short of the price abroad by the cost of transport if the product is one that is being exported to the foreign country. In other cases the difference in price will be less than the cost of transport.

The consumers' outlay is applied to the acquisition of home trade products and of foreign trade products. Its division between the two classes depends upon the consumers' preferences. The demand for each class of products will elicit a corresponding supply. The prices of home trade products will be determined by the market at such a level as to equalise demand and supply. Supply depends upon the productive resources of the community itself, and prices must be high enough to prevent demand outstripping the capacity of those resources.

On the other hand, the demand for foreign trade products cannot be regulated in this manner. There are world markets to draw upon, and the demand from one country will be in general small in comparison with world supplies. Demand cannot be checked by the limited rise which might occur in world prices, but the equalising factor is found in the rate of exchange. The rate of exchange is the link between prices at home and world prices. An unfavourable movement of the exchanges is equivalent to a general rise in the prices of foreign trade commodities, a favourable movement to a general fall.

With a given consumers' outlay, the more favourable the exchanges, the greater will be the share of wealth secured by the consumers from world markets. Or to put the same thing in another way, the greater the value of the consumers' outlay in terms of foreign currencies, the more attractive will be the market offered by the country for foreign trade products. Imports will be attracted from abroad, and exportable goods will be diverted from foreign markets to the home market.

But the share of foreign trade products which the country can *pay for* depends upon its own output of such products, including both exports and the production of goods of the exportable and importable classes for home consumption. The favourable rate of exchange which attracts imports discourages the production of foreign trade products, because it makes world prices less profitable to the producer. Similarly, an unfavourable rate of exchange checks imports and stimulates the production of foreign trade products, by promising an increased profit.

Equilibrium in the foreign exchange market depends upon the purchases and sales of foreign trade products balancing. When we speak of purchases and sales balancing, we do not mean that exports and imports are *equal*. It is not only the liabilities in respect of the export and import of marketable products that have to be settled through the foreign exchanges. The equilibrium required is in respect of *all* liabilities, from whatever transactions they may arise. Marketable products include, besides material goods which appear in the trade returns, services, such as those of ships, bankers or insurance companies, which can be rendered internationally, and services rendered by one country to travellers from another.

Outside marketable products the most important category is that composed of the obligations arising from capital transactions. Liabilities may arise from past investments; the capitalists of one country may possess property or securities in another, and may be entitled to draw interest, rents, profits or dividends therefrom. And *new* investments create liabilities from the lenders to the borrowers; he who invests in a foreign country takes upon himself the liability to send thither the capital sum invested. The effect is substantially the same, whether the investment is a new issue, or the purchase of an existing security from a foreign holder in the investment market. When foreign-held securities fall due for repayment, the money, or so much of it as is not re-borrowed, has to be provided through the foreign exchange market in the same way as if the securities were being bought.

Equilibrium does not require an equality of exports and imports; it requires an excess of exports or an excess of imports just sufficient to cover the balance of other payments due to or from other countries, as the case may be.

Whenever the purchases and sales of foreign trade products do not balance, in this sense, the excess of purchases or sales presses upon the foreign exchange market, and occasions an unfavourable or favourable tendency in the rates of exchange. The consequent rise or fall in the prices of foreign trade commodities results in a readjustment of demand and supply, and re-establishes equilibrium.

Thus the equilibrium to which the foreign exchange market tends is an equilibrium of the *price level.* The purchasing power or wealth value of a currency unit is measured by the inverse of the price level; in proportion as the price level rises or falls, the purchasing power of the unit falls or rises. If the purchasing power of the currency units of two countries be considered in terms of foreign trade products only, then the rate of exchange between the two currency units will approximate closely to the ratio of their purchasing power so calculated.

The rate of exchange will not, in general, be exactly equal to the ratio of purchasing power, because the prices of foreign trade products may differ in the two countries by anything up to the cost of transport between the two. And to the cost of transport will have to be added whatever import or export duties are charged *en route*.

The approximation of the rate of exchange to the ratio of purchasing power in terms of foreign trade products does not depend upon equilibrium being reached in the foreign exchange market. It is brought about by the free working of the markets in foreign trade products. Even if equilibrium has not been reached, the markets will still prevent any material discrepancy existing between the prices of the same product in terms of the two currencies. The rate of exchange will itself have to change in order to regain equilibrium, and the price level in one or both countries must change with it.

Up to this point we have assumed the currencies of any two countries to be independent of one another, in the sense that there is nothing to prevent the rate of exchange varying to any extent that circumstances may require. If one or both currencies are of inconvertible paper this condition is fulfilled. But if both are of gold, it is not so.

If in any two countries credits can at all times be obtained in exchange for gold, and gold for credits, at a prescribed price, a credit in one country can be transformed into an equivalent credit in the other at no more than the cost of sending the value of the credit in gold from one to the other. If too high a price is asked in the exchange market for credits in one country in terms of credits in the other, traders will resort to this alternative method of remittance by sending gold. Thus the rate of exchange oscillates between an upper and a lower limit. The limit at which it becomes more profitable to export gold than to buy foreign credits is called the "export gold point" or "export specie point;" the limit at which it becomes more profitable to import gold than to sell foreign credits is called the "import gold point" or "import specie point." The intervening point at which the rate of exchange just represents the relative amount of gold in the two monetary units is called the "par of exchange." The cost of sending any considerable sum of gold, including freight, insurance, and interest for the period of the voyage, is small in proportion to the value of the gold. In time of peace it does not much exceed 1 per cent. for the longest voyage, and in most cases it is ½ per cent. or less, though in time of war the insurance against war risks and the various restrictions on international intercourse may make it much higher. The result is that, in time of peace at any rate, the causes which tend to make the foreign exchanges favourable or unfavourable display their chief effects in imports and exports of gold.

We need to apply to the foreign exchange market the same sort of analysis as we applied, in Chapter IV., to show the effect of an expansion or contraction of credit in the home market.

Suppose that an expansion of credit begins to take effect in a country previously in a state of equilibrium. There ensues an increase in the consumers' income and in the consumers' outlay. The increase in the consumers' outlay will be applied partly to home trade products, partly to foreign trade products. The increased outlay on home trade products will become increased income to the producers of those products, derived partly from increased output and partly from the higher prices they obtain. The increased outlay on foreign trade products may be met to some extent by increased output on the part of the home producers of such products. but mainly by increased imports and by the diversion of supplies from export to the home market.

The pre-existing equilibrium is therefore disturbed. There is an excess of imports to be paid for, and a deficiency of exports to provide the means of paying. The foreign exchange market will seek equilibrium by quoting less favourable rates of exchange. If the currency is independent of foreign currencies, so that any required adjustment of the rate is possible, equilibrium can be found. The general increase of prices caused by the expansion of credit will be reflected in the prices of foreign currencies quoted in the foreign exchange market, and therefore in the prices of foreign trade products.

There will be a general and approximately uniform rise of prices measuring the depreciation of the currency unit.

On the other hand, when the currency is linked with those of foreign countries by a gold standard, the natural return to equilibrium by way of an alteration in rates of exchange is barred. If credit has expanded and has unduly inflated the consumers' outlay, there will be an excess of imports. There will be room for some increase in the prices of foreign trade products, inasmuch as all those which are not being imported can rise in price up to the point at which importation will begin to pay.[1] But with exportable goods this rise cannot begin till exportation has ceased. The effect of the inflation upon foreign trade products will only be felt to a slight extent in a rise of the price level ; it will appear mainly in an adverse trade balance, an increase of imports and a decline of exports. When the monetary conditions are such as would otherwise cause a rise or fall of prices, but that effect is prevented by the existence of a foreign supply or demand, we have a *virtual* rise or fall of the price level, a *virtual* depreciation or appreciation of the currency unit, just as in the case where traders' stocks of commodities are drawn on or added to.

That implies a loss of equilibrium. In case of a virtual depreciation of the currency, the excess of imports causes a scarcity of foreign currencies in the foreign exchange market, and rates of exchange go up to the export gold point. Thereupon gold begins to be exported, and rates of exchange can go no further ; the excess of imports begins to be paid for by exports of gold.

Equilibrium can be restored either by abandoning the gold standard and letting the virtual depreciation of the currency give place to an actual depreciation, or by contracting credit till the consumers' outlay is so reduced as no longer to attract an excessive share of the world's supply of foreign trade products.

Just as an expansion of credit causes an excess of imports, so a contraction of credit, by diminishing the consumers' outlay, causes an excess of exports. With inconvertible paper currencies the exchanges become favourable, and equilibrium is restored by a fall in the prices of foreign currencies and, therefore, of foreign trade products.

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[1] The extent of the rise may be materially increased where there are protective import duties more than sufficient under normal conditions to exclude the dutiable goods altogether.

With an international gold standard the exchanges will reach the import gold point, and gold will be received. There is virtual appreciation, and the influx of gold can only be stopped either by abandoning the gold standard and allowing foreign gold currencies to fall to a discount, or by expanding credit. But whereas in the case of a virtual depreciation the efflux of gold, if left unchecked, eventually makes the continuance of the gold standard impossible, in the case of a virtual appreciation the influx of gold, if left unchecked, will eventually flood the country with currency, will prevent any restrictive regulation of credit, and will bring about the expansion of credit required to restore equilibrium on a gold basis.

Even with inconvertible paper there may be some virtual appreciation or depreciation of the currency; there may be an interval when the effect of a contraction or expansion of credit is felt not in the rates of exchange but in the balance of payments. Any discrepancy in the balance of payments that can be met by the regular dealers in the foreign exchange market out of their balances is likely to be small. But sometimes speculators intervene and relieve the regular dealers of surplus balances in one currency or the other, or the dealers themselves may be willing to speculate.

It will now be clear that it is wise to go cautiously before explaining a favourable or unfavourable movement of the foreign exchanges by a favourable or unfavourable balance of trade. An expansion of credit *causes* an unfavourable balance of payments; a contraction *causes* a favourable balance. In either case the change in the balance is no more than a symptom. And of course the balance that is in question is always the balance of *payments*, not the balance of trade in the narrower sense of the difference between exports and imports of material commodities.

In more general terms, the existence of an uncovered balance on either side is a sign that the rates of exchange quoted in the market are not in correspondence with the monetary position. An excess of imports is evidence that the foreign exchange market under-values foreign currencies; rates are too favourable. An excess of exports is evidence that the market over-values foreign currencies; rates are not favourable enough. Either divergence provokes a movement towards the equilibrium point, correcting the exchanges.

On the other hand, the balance of payments may be disturbed by other causes, and the equilibrium point may be thereby shifted. For example, suppose that there is a decline in the output of foreign trade products, such as might be due to a failure of the harvest in a grain-exporting country. In that case the effect on the foreign exchanges appears at first sight to be as simple and direct as possible. One large item being dropped out of the total of payments due from abroad, the equilibrium is destroyed, and the exchanges must become unfavourable.

But a closer scrutiny will show that the matter is not so simple as this. The immediate effect of the failure of the harvest is to diminish the income of the agricultural population, and therefore the consumers' income as a whole, to the extent of the deficiency. But this reduction in the consumers' income will be accompanied by a reduction in the consumers' outlay. The consumers' outlay is applied partly to home trade products and partly to foreign trade products. The shrinkage in the consumers' outlay as a whole will mean a shrinkage in the outlay upon foreign trade products; that will be a partial though not a complete relief to the foreign exchange market from the effects of the shrinkage in output and exports of such products.

There will still be an adverse balance to be met in the foreign exchange market, but meanwhile there will be reactions in the rest of the economic system, that is to say, in the output and consumption of home trade products.

For if the shrinkage in the outlay on foreign trade products is a part only of the shrinkage in the consumers' outlay as a whole, there must be some shrinkage in the outlay on home trade products. The demand for home trade products will therefore fall short of the supply. Now the consumers' income is derived partly from foreign trade products and partly from home trade products,[1] and under equilibrium conditions the outlay on each class of products must balance the income derived from that class. The disturbance we are assuming upsets the balance in both cases. Outlay exceeds income in the case of foreign trade products, and falls short of income in the case of home trade products.

In the case of home trade products the shrinkage of outlay will itself tend directly to bring about a shrinkage of income. So far as material products are concerned, a discrepancy between income and outlay can exist for a time. The excess of output over demand can pass into traders' stocks, and be valued for balance sheet purposes at current prices, just as if the whole had been sold. But this cannot last long, because the accumulation of stocks will tend to discourage production and depress prices. And so far as the products take the form of services rendered, there can be no accumulated stocks, and the decline in outlay must be accompanied by an equal and simultaneous decline in the incomes of those who render the services.

Therefore, to the shrinkage in the consumers' income arising directly from the deficiency of output of foreign trade products has to be added a further shrinkage on account of the reduced business of traders in home trade products. Their incomes being reduced, their outlay will also be reduced, and there results a decline in outlay both on home trade and on foreign trade products.

The decline in outlay on foreign trade products is a further contribution to equilibrium in the foreign exchange market, but the decline in outlay on home trade products *intensifies* the loss of equilibrium in the market for those products, and starts a fresh cycle of falling income and falling outlay.

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[1] We may regard *all* incomes as derived from production of something. Any item of income which is not received in return for some service rendered, or some contribution by person or property to a productive process, may be regarded as charged upon and paid out of incomes so derived.

The essence of the process is that, so long as demand exceeds supply in the markets for foreign trade products, supply exceeds demand in the markets for home trade products, and the consequent state of depression in these latter markets must ultimately reduce the consumers' outlay as a whole to such an extent that the outlay on foreign trade products no longer exceeds the income derived from those products. Only then will income and outlay be equal again in the domain of home trade products.

Up to this point we have taken no account of possible changes in the unspent margin. The reduction in the consumers' income is accompanied by a reduction in the consumers' outlay, but not by an *equal* reduction. When the consumers' income is reduced, the consumers' outlay does not, in general, fall simultaneously to an equal extent. People do not immediately accommodate their expenditure to their reduced incomes, but for a time draw on balances. There is an interval during which the consumers' outlay exceeds the consumers' income, and consumers' balances are being depleted by the excess.

The lag in the reduction of the consumers' outlay keeps up demand to something more than the reduced consumers' income would provide. The discouragement to production and the depression of prices of home trade products are less than they would otherwise be. The decline in the outlay on foreign trade products is also less, and the adverse balance to be met through the foreign exchange market is greater.

The sum by which consumers' balances are diminished in any period of time passes into traders' balances. Traders as a body, with turnover diminished, will not want to hold increased cash balances. Those who deal in home trade products will, in any case, find their cash balances not increasing but decreasing, inasmuch as they have to meet a shortage of demand.

If, for the moment, we leave out of account a possible restriction of credit or change in the volume of bank advances, the whole amount by which the balances both of the consumers and of the traders in home trade products are being diminished is being added to the balances of the traders in foreign trade products.

But these traders are becoming indebted to the foreign exchange market for the adverse balance of trade; they pass on the additional cash they receive to the dealers in foreign exchange. Rates of exchange will thereupon become unfavourable.

The further progress of events depends on the currency system adopted, that is, on whether the country is one of a gold standard group, or has an independent paper currency. In the former alternative bullion dealers will take advantage of the unfavourable rates of exchange to buy gold, sell it abroad for foreign currencies, and dispose of these foreign currencies to the dealers in foreign exchange. The surplus balances of the dealers in foreign exchange will thus be passed on to the bullion dealers, who will probably apply them to repay bank advances procured for the purpose of buying the gold.[1] By this process the surplus cash is in effect extinguished, and the unspent margin diminished by the amount.

There are *three* different processes leading towards equilibrium, and all three have to be completed before equilibrium is secured: (1) the outlay on home trade products is declining and is dragging down the income derived from home trade products, (2) the decline in the consumers' outlay is bringing about a decline in the outlay on foreign trade products, and (3) the unspent margin is diminishing. So long as the diminution in the unspent margin is in progress, the other two processes are *retarded,* because the consumers' outlay is swollen by the expenditure from balances. When equilibrium is finally attained, the consumers' income and the consumers' outlay will be equal. Each will have been reduced by an amount composed of the original diminution in the consumers' income attributable to the shortage of the harvest, together with the subsequent diminution in the income derived from home trade products. It is a condition of equilibrium that the total reduction in the consumers' outlay must be such that the portion applied to foreign trade products is no longer more than sufficient to balance the output of such products.

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[1] It is easy to borrow on gold, and bullion dealers are accustomed to undertake transactions large in proportion to their own free capital.

If the proportion in which the consumers' outlay is divided between the two classes of products remained unchanged, it would be possible to say that equilibrium requires the same proportional reduction to be made in the income from home trade products as has been made in the income from foreign trade products. For example, if the output of foreign trade products fell 10 per cent., the income derived from home trade products would have to fall 10 per cent. The former would be mainly a reduction in *quantity*,[1] the latter a reduction (eventually at any rate) in *price*. The result would be a reduction of 10 per cent. in the consumers' income, in the consumers' outlay as a whole, and in the outlay on foreign trade products.

But for various reasons the proportion in which the consumers' outlay is divided between foreign trade products and home trade products may be expected to change. In the first place, the fall in the prices of home trade products will tend to divert demand to them from the foreign trade products, of which the prices remain substantially unchanged. Secondly, the depressed condition of the markets in home trade products may, to some extent, divert productive power to foreign trade products (though in case of a purely temporary disturbance, such as we are considering, this would only occur to a very limited extent). Thirdly, and most important of all, capital movements will be modified. A country invests abroad out of its superfluity, and invests most when its profits are greatest. If for any reason there is a shrinkage in profits, not only do investments abroad fall off more in proportion than any other item of outlay, but the country is likely to obtain more assistance from foreign capital than usual. Whether the country is normally a lender or a borrower on balance in the international investment market, the general effect is the same. The gap to be made good between exports and imports is partially filled by movements of capital, and the severity of the compression to be effected in the markets for home trade products is mitigated.

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[1] The prices of foreign trade products are not absolutely fixed. If a product which was formerly imported begins to be exported, its price will have fallen by an amount equivalent to the cost of transport from the former source of supply *plus* the cost of transport to the new export market (and possibly also *plus* import duty). Any intermediate variation of price is possible.

Under the conditions we have been assuming the whole of the requisite reduction of the unspent margin has been effected by means of exports of gold. But if there is a contraction of credit, this will not be so.

The loss of gold itself would tend to bring about a contraction of credit, for the country cannot afford to lose an indefinite quantity of gold. Internal monetary needs can be met with paper money, but the paper money must be convertible and must be backed by an adequate gold reserve. If the gold reserve is at the level which prudence or policy requires, a loss of gold will reduce it below that level. The only remedy is a contraction of credit. It may therefore be expected that as soon as the loss of gold makes itself felt there will be some contraction of credit or retardation of lending by the banks, which will hasten the decline in the consumers' income and consumers' outlay. But the producers of foreign trade products still secure world prices, and their output will not be affected by the contraction of credit, except that their sales at home will fall off, and they will have to increase their sales abroad so far as they can.[1] The reduction in the consumers' income arises from a reduction in the output and prices of home-trade products. The consequent reduction in the consumers' outlay is divided between home trade and foreign trade products. It is the reduction in the outlay on foreign trade products which, in conjunction with the increased exports, makes for equilibrium.

Thus a credit contraction provides a short cut to equilibrium. By annihilating a portion of the unspent margin it avoids the necessity for exporting an equal amount of gold.

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[1] This is not true without exception, see chap. ix. pp. 135-9.

Credit might be so adjusted as to avoid the export of any gold at all. But as the new equilibrium position will involve a smaller unspent margin in correspondence with the reduced consumers' income and consumers' outlay, it would be natural to allow some gold to go.

There remains to be considered the case where the currency is not linked by a metallic standard to those of foreign countries, but is independent of them, as in the case of inconvertible paper money. Here, as before, if there is no contraction of credit, the surplus cash disbursed by the consumers is passed on by the traders to the dealers in foreign exchange, but it cannot be withdrawn in gold ; the dealers will quote higher and higher rates for foreign currencies. The result will be to raise the prices of foreign trade products. The income derived from foreign trade products will be correspondingly raised, and at the same time the consumption of foreign trade products will be checked. The general tendency will be to regain equilibrium without any reduction in the consumers' income or the consumers' outlay or the unspent margin, but with a rise of prices, especially or perhaps solely, of foreign trade products. Stability in the foreign exchanges is sacrificed, but on the other hand the depression in the markets for home trade products is escaped.

This is on the assumption that no active measures are taken in the direction of credit control. By a suitable contraction of credit it would be possible to reduce the adverse movement of the foreign exchanges and the rise in the prices of foreign trade commodities within any desired limits. It might be possible, without actually adopting a gold standard, to prevent *any* adverse movement of the exchanges or rise of prices from occurring at all. A contraction of credit might be so contrived as to reduce the consumers' income and the consumers' outlay forthwith to the whole extent required, and to effect the necessary reduction in the outlay on foreign trade products without any rise of prices.

The foregoing analysis proceeded from the assumption that the output of foreign trade products had been diminished owing to a crop deficiency. But it is applicable to any other non-monetary cause of an unfavourable balance. There may be, for example, a shortage of production owing to a trade dispute or to a natural calamity. Or there may be a temporarily-increased *demand* for some class of foreign trade products. The same analysis is applicable *mutatis mutandis* to any non-monetary cause of a *favourable* balance of payments, such as abundant crops, or an exceptional foreign demand for the country's products.

Again the disturbance of the balance may arise from movements of capital. Suppose a borrowing operation in one country to provide funds for an enterprise in another. Credits are brought together in the former from the subscribers of the loan, and are placed at the disposal of the borrowers, who must exchange them for credits in their own country before they can use them. It is as if the securities acquired by the investors were foreign trade products, and the outlay on foreign trade products were increased by their amount.

The subscribers to the loan provide the necessary funds by restricting their expenditure on other things, both home trade products and foreign trade products. There follows that compression of the outlay on home trade products and of the income derived from them, which appeared in the other case, and it must continue till an adequate reduction has been effected in the outlay on foreign trade products. In the interval before equilibrium is attained, gold will be exported, but equilibrium can be hastened by a contraction of credit. The contraction of credit diminishes the consumers' outlay, makes the country a less favourable market for imports and other foreign trade products, and so brings about a surplus of exports sufficient to offset the burden placed upon the foreign exchange market by the loan.

Meanwhile, the contrary process must be going on in the borrowing country. The proceeds of the loan are paid away to people employed on the works for which it is destined, and become, in their hands, an addition to the consumers' income. There results increased outlay, partly on home trade products and partly on foreign trade products. There must be an expansion of the outlay on home trade products and of the income derived from them, till an adequate increase has been brought about in the outlay on foreign trade products. Gold will be imported, or equilibrium can be hastened by an expansion of credit which increases the consumers' outlay, attracts imports, and so offsets the burden placed on the foreign exchange market at that end.

Equilibrium is attained when the lending country is contributing the proceeds of the loan in the form of a relative excess of exports, and the borrowing country is receiving them in the form of a relative excess of imports. That does not mean that the lending country is sending the goods direct to the borrowing country. Each effects the requisite adjustment in its dealings with world markets. The lending country may diminish imports as well as increase exports; the borrowing country may diminish exports as well as increase imports.

When the whole proceeds of the loan have been transmitted by this process, the foreign exchange market will revert to the condition in which it was before the borrowing and lending began. Rates must now move in favour of the lending country and against the borrowing country. Gold will tend to pass from the latter to the former, but if credit is contracted in the one and expanded in the other promptly enough, any actual movement of gold may be prevented.

It often happens that an exceptional volume of lending abroad or export of capital puts but little strain on the foreign exchange market because it is merely an accompaniment of exceptionally profitable business. If the profitable business is due to unusual productivity (e.g. a good harvest) or to favourable markets abroad, it sets up a favourable tendency in the exchanges, and the export of capital then helps to restore equilibrium. On the other hand, business may be made more profitable by a mere expansion of credit without any increase of exportable resources. The purchase of foreign securities in that case plays its part along with the additional purchase of foreign trade products, in causing an adverse balance of payments.

Up to this point we have been considering *temporary* disturbances of the balance of payments. But permanent alterations are exactly similar, except that they are not followed by any reaction. A deficient harvest makes the exchanges adverse, and necessitates a contraction of credit if the currency is to be saved from depreciating. If the next season brings a normal harvest, the exchanges become favourable and credit can be allowed to expand again. If the supplies of some exportable product on which the prosperity of the country has materially depended become exhausted, a contraction of credit is required to save the currency from depreciation, but there is no subsequent opportunity of expansion. The relation between the price levels of home trade products and of foreign trade products is permanently altered. Similarly, when the power of a country to produce foreign trade products is permanently enhanced, a credit expansion will raise the prices of home trade products relatively to those of foreign trade products.

Along with the prices of home trade products, wages are lowered by the credit contraction and raised by the credit expansion. When a country's exporting power is improved, the resulting export excess can be corrected by an expansion of credit, because wages and costs of production are thereby increased. When exporting power falls off, a contraction of credit diminishes wages and costs of production, and restores the balance.

Thus in every country the relation of the home trade price level and the foreign trade price level depends upon its exporting power. A country which is very rich in some exportable natural products may concentrate its productive resources upon them. Wages will tend to be high enough to make unremunerative the production of any commodities which can be imported at moderate cost. Prices of home trade products will be in proportion to wages, while prices of foreign trade products must, as always, correspond to world prices.

"Exporting power" is not the only factor. The same effect follows from the possession of foreign investments, the interest and dividends from which give command over imports without any corresponding exports. Equally it follows from an international trading business, which gains a country mercantile profits at the expense of other countries. Any condition which gives the country strength in external markets in these ways tends to raise the home trade price level and the wage level relatively to the foreign trade price level. And any condition which weakens it in external markets has the contrary effect, whether it be a lack of exporting power, indebtedness for interest on foreign capital, or the payment of profits to foreign merchants. In the former case there is a virtual appreciation of the currency, and in the latter a virtual depreciation. There is a loss of equilibrium, which has to be corrected in the one case by an expansion of credit, in the other by a contraction.

Thus it will be seen that the price level has to accommodate itself to many *non-monetary* influences. Account must be taken of these influences in applying the principle of purchasing power parity so ably expounded by Professor Cassel. Put shortly, this principle is that rates of exchange vary in proportion to the price levels in the countries they relate. Marshall, taking the exchange between England and Russia to typify the case of currencies not related by a common metallic basis, said that " when trade is in equilibrium the gold price of the rouble will be fixed just at the ratio which gold prices in England bear to rouble prices in Russia." (Evidence before the Gold and Silver Commission, Question 10226, 23 January, 1888.) But this is not exactly Professor Cassel's doctrine. Marshall, as the context clearly shows, was thinking of the price level of *foreign trade products only ;* for he proved his point by showing that the market must immediately correct any discrepancy between the prices of the same goods in the two countries.

As we have already seen, the value of a currency in the foreign exchange market is very nearly in exact proportion to its wealth value or purchasing power in terms of foreign trade products. But if purchasing power be measured in terms of products of all kinds, this is no longer so, because there may be a wide divergence between the price levels of home trade products in the two countries. Accordingly, Professor Cassel confines his principle to asserting that a *change* in the rates of exchange between two countries is, in general, traceable to a proportional change in their price levels. And he carefully qualifies the principle so enunciated by pointing out that a variety of circumstances may cause the rate of exchange to deviate from this proportional change.

Our analysis enables us to see exactly how such deviations occur. Any disturbance of the balance of payments has to be corrected by a change in the relation between the price levels of home trade products and foreign trade products, or, as they are often called, the internal and external price levels. This is so, whether the change is temporary or permanent.

The doctrine of purchasing power parity has played a great part in recent years as a corrective of the very prevalent tendency to attribute all movements of the foreign exchanges to disturbances of the balance of payments. In practice such disturbances usually count for much less than monetary causes. And the monetary causes themselves upset the balance of payments. An expansion of credit attracts an excess of imports, a contraction causes an excess of exports, and the subsequent tendency in the foreign exchanges, unfavourable in the former case and favourable in the latter, is needed to correct the excess. This it does by bringing the value of the currency unit quoted in the foreign exchange market into conformity with its true value or purchasing power.

When we speak of a price level, or of the wealth value of a currency unit, we are implicitly assuming that *markets* are functioning. It is only in a market that a product can have a determinate price at all. Markets are an indispensable part of the economic system as we know it. Nevertheless, they do occasionally break down under the stress, either of panic or of violence, or of a monetary upheaval. When we say that markets break down, we mean that conditions arise in which a product may be sold at widely different prices at the same time, and either in the same place or in places between which it can readily be transported. That may be because the intercommunication among buyers and sellers which ordinarily prevents inequalities becomes impossible, or because opinions as to the prices at which demand and supply will balance in the immediate future become so unsettled that the transactions of one moment have no definite connection with those of the next.

Under such conditions it is no longer true that the prices of foreign trade products are governed by world prices. Forced sales at ruinously low prices may for a time fail to elicit any demand from abroad, and produce no favourable effect on the exchanges. A demand for imported goods at prices fantastically high may attract no foreign supplies, and so a depreciation of the currency may not be reflected in the foreign exchange market.

Or again, when the gold standard has been abandoned, and the currency depreciates, the effect is to reduce costs of production in terms of foreign currencies. But the reduction of cost may fail to stimulate exports, simply because the opportunity of exceptional profit is not widely enough known, or because the requisite organisation of transport and marketing cannot be created. The result may be that the exports are sold far below world prices, and for a time the total value of exports in terms of foreign currencies may be reduced instead of being increased. So far as the export trade is concerned, less than no progress is made towards restoring equilibrium in the balance of payments. Such a failure of markets would lead to an exaggerated depreciation of the currency; the foreign exchange market might itself break down, in that it would not be possible on any terms to procure the foreign currencies required to discharge accrued liabilities for imports or other obligations.

We shall examine in more detail the phenomena of unstable currencies in Chapters XIV. and XV.

CHAPTER VI.

SYSTEMS OF NOTE ISSUE.

Now that we have dealt with the principles of the foreign exchanges, we can return to the consideration of the control of credit and currency at the point at which we left it.

In Chapter IV. we showed that the use of paper money can best be regulated on banking principles, and that the most suitable organ of Government for the purpose is a Central Bank with a monopoly of legal tender note issue. The sole right of creating the medium with which debts may be lawfully discharged cannot be lightly handed over to a private institution, or even to a State Bank. That right, along with the power it confers of controlling the entire credit system, must be subjected to carefully devised legal or, at any rate, administrative restraints.

One such restraint, which has everywhere prevailed, and has rarely been departed from except under pressure, is that imposed by convertibility into the precious metals. Historically, the use first of bank notes and then of paper money has been adopted to supplement a metallic currency. The note-issuing authority was obliged to pay the notes on demand in coin. On occasions it was found that circumstances, unforeseen and unexplained, swept away metallic reserves and made continued compliance with this obligation impossible. Bitter experience showed that reliance could not be placed on the wisdom of a Central Bank, if left unsupported by any authoritative guidance as to the measures to be taken to maintain convertibility. Recourse was therefore had to various devices for circumscribing the discretion of the note-issuing authority, and in particular to rules prescribing the gold reserves to be held against the notes.

In the present chapter we shall have to examine the different relations that may be established by law or practice between the supply of gold on the one hand and the quantity of paper money issued on the other. Since the bankers regulate credit according to their supply of legal tender money, it will be these relations that ultimately determine the effect of a gold movement in expanding or contracting credit.

It must be remembered that the bulk of the demand for legal tender money is for the payment of wages. Money, whether gold, silver, or paper, which is in too large denominations for this purpose, will not satisfy the demand. In the Middle Ages, when a foreman got 4d. a day, a skilled mason 3d., and a labourer 1½d. or 1d., the only English coin was for a long time the silver penny, which was about the size of our present threepenny-piece. In the fourteenth century a certain amount of gold was coined for the convenience of merchants, but silver was inevitably the standard, and even in silver the standard coin was very small. In England, before the war, the smallest denomination of legal tender paper money was the £5 Bank of England note, and wages were paid in gold and subsidiary silver. In France, before the war, the smallest notes were for 50 francs. These, being the equivalent of about £2, were more adapted to retail transactions and to wage payments than the English five-pound notes, but none the less a considerable circulation of 10- and 20-franc gold pieces was required, for silver 5-franc pieces, though unlimited legal tender, are too bulky to be convenient for large payments. The United States, on the other hand, has always been a paper-using country, notes down to one dollar being in ordinary use.

Gold may be needed for any or all of three distinct purposes. It may be needed for circulation as coin, or to form a reserve against the circulation of paper, or for export to a foreign country. The two former sources of demand depend upon the law governing the currency. If the law allows no paper money below a certain denomination, and if that denomination is too high for some considerable class of payments above those for which subsidiary silver is suitable, then gold coin will circulate, and a demand for legal tender money will materialise, in part at any rate, as a demand for gold coin. In so far as the demand can be met by the issue of paper money, an addition to the supply of gold may still be necessary if, as is usually the case, the law prescribes a relation between the amount of paper money issued and the amount of gold held in reserve against it. But it is important always to bear in mind that these requirements are imposed by law and can be altered by law. If no notes are allowed below £5 or 50 francs, the legislature can alter this at any moment and authorise the issue of notes down to 10s. or 5 francs. If the note issue is limited by some relation to the gold reserve, the legislature can suspend the limit.

In the last resort it is only the demand for export which cannot be regulated by a change in the law. The demand for export arises when the exchange on a foreign country reaches the export gold point. Thereupon it becomes profitable for anyone who possesses or can obtain any considerable sum in gold to send it to the foreign country, and in practice bullion dealers and exchange dealers will take advantage of this, *provided* that the market price of gold does not exceed its coinage price. The coinage price determines the value of the money of account in gold; so long as it is exactly maintained, the gold standard is preserved; whenever the market price of gold deviates in any degree from the coinage price, the gold standard is to that extent departed from. So long as the paper money is genuinely convertible on demand into gold, and bank credits into paper money, the market price of gold is effectively kept down to the coinage price, for there is always a seller at that price. If credits cannot be thus transmuted into gold on demand, then the price of gold may at any time rise above the coinage price.

The management of a currency based on a gold standard under modern conditions has two principal branches—first, the accumulation and maintenance of a sufficient gold reserve to secure the invariable convertibility of bank credits and paper money into gold; and, secondly, the regulation of the value of the monetary unit, by inducing an expansion or contraction of credit as the circumstances may require. The second is the more fundamental. The export of gold is a sign that the value of the monetary unit has fallen (virtually or actually) below the point at which equilibrium is maintained in the foreign exchanges, whether this fall be due to an excessive expansion of credit, or to some other cause, such as a shortage of exportable commodities. The remedy for the depreciation of the monetary unit is a contraction of credit. If this remedy is not applied, gold may go on being exported, and yet the exchanges may remain adverse, for, so long as the quantity of purchasing power in circulation is excessive, the value of the monetary unit, as determined by the quantity theory, will be depressed. In such a case no gold reserve will be great enough to secure convertibility. On the other hand, if credit is adequately controlled the drain of gold can be stopped, and it is only necessary to have such a stock of gold available in the country as will just meet the maximum possible demand for export in the interval between the first commencement of the drain and the time when the steps taken for the contraction of credit become effective. To this aspect of the question we shall return later. Here we shall consider the different systems that have been devised for accumulating and regulating gold reserves.

There are some systems of note issue which do not require any regulation at all, being absolutely automatic in their operation. In the United States the public prefer paper to gold. The gold available for circulation does not pass from hand to hand, but is deposited with the Treasury in exchange for " gold certificates." The Treasury is not called upon to exercise any discretion in the matter ; it receives and keeps the gold, and the gold certificates in circulation are exactly equal to the gold kept. So long as what is needed is money for internal payments, the certificates pass from hand to hand and remain outstanding. As soon as gold is needed for export, the certificates are presented and the gold withdrawn. But however many certificates are presented the gold, of course, is always forthcoming. It might be supposed that this system of gold certificates is indistinguishable from that of a gold coin circulation, except merely for the greater or less convenience of handling paper instead of coin. But there is just this difference, that in an emergency the notes may *cease* to be mere gold certificates; some of the gold by which they are secured may be diverted to other purposes, or new notes may be put into circulation without their equivalent in gold being added to the reserve. This may not be in accordance with the law, but the law may be amended, or, in extreme emergency, broken.

In the United States such a measure would probably not be thought legitimate in any circumstances. The gold certificate is regarded as a receipt for the deposit of gold, not as a debt, and to refuse to restore the gold deposited would be a breach of faith. But even there the certificate does not entitle the holder to any *particular parcel* of gold, but merely to the agreed amount of gold; and so long as the Treasury does, in fact, always produce the agreed amount of gold on demand, it would be difficult to argue that the diversion of part of its stock of gold to other purposes is a default upon its obligations to the certificate holders, who do not suffer damage of any kind.

Since December, 1919, gold certificates have been legal tender. This is a long step towards recognising them as paper money with an existence independent of the gold they represent.

But whatever the legal or moral position in the United States may be, there is no theoretical obstacle to the creation of a note issue required by law to be wholly backed by gold, under such conditions that an amendment of the law releasing part of the gold in an emergency would be morally quite legitimate.

Of course, a gold coin circulation may be supplemented in time of crisis with a new issue of notes, provided that the notes can be prepared and printed in time, and that people can be induced to accept them. A gold coin circulation provides an indirect gold reserve which can be drawn on as fast as paper can be issued to take its place. But the displacement of gold by paper may take a considerable time. The banks may agree to pay out nothing but paper, and to place all the gold which they receive in the course of business in a central reserve in exchange for the paper they draw out. But they probably cannot be compelled to do this, if they think it is better business to keep the gold in the hope of its earning a premium later on, and even if they agree, much of the gold coin in the country may not pass through their hands. The man who is too poor to have a banking account, and keeps his cash balance in the house, will probably leave the same little accumulation of gold coins almost untouched week after week, month after month, perhaps even year after year. It is only when the emergency arises for which the reserve provides that he actually draws it out. If he finds that his employer begins one day to pay his wages in paper instead of gold, he will spend the paper money as he receives it, but his little hoard of gold will still remain untouched. Under a gold certificate system this problem of displacing gold from circulation does not arise. The cash actually in people's hands is already in the form of paper; the gold is already assembled in one central stock. Nothing is needed but the suspension of the law to make the gold available as well as the paper.

Another system of paper money which requires no discretion in its management is that of an absolutely fixed issue, *provided* that the amount fixed is distinctly less than the minimum amount of legal tender currency ever needed for internal circulation. This proviso is very important, for if the fixed note issue is ever in excess of the amount of legal tender currency needed, the limit becomes inoperative, and the currency requires as much management as if there were no limit at all. The demand of a community for currency cannot be absolutely fixed, and if the fixed issue is below the minimum demand the paper must always be supplemented by some other form of money, the amount of which will vary according to the need for it. So long as gold and paper circulate side by side subject to a legal tender law, the paper will pass at its nominal value. The supply of paper being *ex hypothesi* insufficient to meet the whole demand for currency, debtors will be compelled sometimes to pay in gold ; when they do so they have no legal right to pay less than they would pay in paper ; consequently gold and paper must circulate at par.

In time of crisis the fixed issue system has both advantages and disadvantages. On the one hand, people are already used to paper money, and the means of producing it are already in operation. If the fixed issue is to be exceeded, it can be done with smoothness and celerity. On the other hand, the actual stock of gold in the country is less than it would be under either the gold certificate system or that of a gold coin circulation. But, of course, provided the gold stock is sufficient to meet the demands of a crisis, any further supply of gold is sheer waste. It would be universally recognised as safe for a country to have *some* uncovered paper money in circulation, and, that being once admitted, the fixed issue system may be classed as a very cautious and conservative form of currency law. In practice the fixed issue system is usually united with the gold certificate system. Notes are issued to an amount equal to the gold reserve held, and to a fixed amount in addition. No distinction need be made between the notes which are covered by gold and those which are not ; that is to say, none of the notes are expressly issued as gold certificates. Consequently, in the event of the law being broken or suspended, there is no room for the accusation of a breach of faith.

This system originated in the famous Bank Charter Act of 1844, which regulated the note issue of the Bank of England, and has since been widely copied with or without modifications. Before that Act the note issue of the bank was in the absolute discretion of the Directors, without even a maximum limit such as that to which the note issue of the Bank of France is subject. The Act of 1844 divided the Bank into two Departments—the Issue Department, which had the sole responsibility for issuing and paying notes ; and the Banking Department, which retained the business of discounting and lending, and creating and transferring bank credits. The Issue Department holds a fixed amount of securities, equal to the fixed fiduciary issue (at present £19,750,000),[1] and as this fixed issue is far below the lowest amount of notes ever in circulation, the business of the Department consists merely in paying out notes for gold and gold for notes. The whole business of regulating credit, which belonged to the undivided Bank of England as the central bank of issue before 1844, now attaches to the Banking Department.

In fact, experience has shown that even with an automatically regulated paper currency, which does not need to be managed on banking principles, a central bank for the control of credit is almost indispensable. For a long time the United States was an example, or rather a warning, of the contrary system. But even there the Associated Banks of the New York Clearing House had already created an organisation which discharged some of the functions of a central bank, before the Federal Reserve Act of 1913 established the system. For although that Act established not a single central bank but a number of "Federal Reserve Banks," each is alone in its own district, and all are subject to some central control.

The effect of the introduction of the rigid limitation of the Bank of England note issue embodied in the Bank Charter Act of 1844 was to leave available as the cash reserve of the Banking Department so much of the gold reserve as was not required to support the notes in circulation in the hands of the public. For accounting purposes it is the practice to leave this gold (except so much as is needed from day to day to use at the Bank's counters) in the vaults of the Issue Department, and to issue an equivalent amount of notes from the Issue Department to the Banking Department. Thus the reserve of the Banking Department is principally composed of that portion of the Bank's power of issue which is not for the time being exercised. If the Bank has £100,000,000 of gold, that entitles it to issue £119,750,000 of notes. If it has, in fact, issued only £90,000,000 to the public, there remains a sum of £29,750,000 in the reserve of the Banking Department. Thus the reserve is a purely legal concept ; it may be either greater or less than the amount of gold held ; its exhaustion is the signal not for the suspension of the Bank but for the temporary removal of the legal limit of note issue.

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[1] The fixed fiduciary issue was originally £14,000,000, but, under the Act, when any of the private banks of issue in England and Wales, through being wound up or absorbed or otherwise, lost their rights of issue, the Bank of England fiduciary issue could be increased by an amount not exceeding two-thirds of the lapsed issues. After remaining at £18,450,000 for nearly twenty years, the fiduciary issue of the Bank was raised to £19,750,000 by an Order in Council of February 12, 1923.

Before 1914 the whole system depended upon this legal limit being respected. The Bank had to conduct its affairs in such a manner that it could always pay its depositors whatever sums they demanded, either in notes and gold for internal circulation, or in gold for export, without breaking the law. It was bound, therefore, to take steps to restrict credit whenever its reserve showed signs of depletion. In the last resort it might be necessary to break or suspend the law.

Four times in fact the Bank had to approach the Government of the day to ask for legislation for this purpose. On each occasion the Government took the responsibility of authorising the breach of the law, and promised to obtain the covering authority of Parliament, if necessary, in the form of retrospective legislation. In the crises of 1847 and 1866 the mere announcement that the Government had taken this step was enough to allay the panic. People had feared that the Bank, in its efforts to observe the limit, would refuse to lend. That fear once removed, the pressure to obtain funds from the Bank in time ceased, and the fiduciary limit was not in fact exceeded. In the crisis of 1857 it was found necessary actually to exceed the limit, and for several weeks the reserve of the Banking Department was in reality a negative quantity.

In the crisis precipitated by the imminence of war in 1914, the letter from the Government authorising an excess was sent on the 1st August. It was closely followed by the passage of the Currency and Bank Notes Act (6th August), which contained a provision, still in force, empowering the Bank to exceed the limit with the permission of the Chancellor of the Exchequer.

The issue of currency notes by the Treasury, authorised by the same Act, robbed the limit laid down for the Bank of England notes of any real significance. On the 7th and 8th August the limit was exceeded, the greatest amount of the excess being £3,043,000. But the excess issue was only needed because a sufficient supply of the new currency notes could not be prepared in time to provide the advances applied for by the banks, and Bank of England notes were temporarily used instead.[1] By Monday, the 10th August, the excess had vanished, and no excess appeared in the published weekly Bank returns.

Under the conditions that existed before the Currency and Bank Notes Act, the necessity of appealing to the legislature was a very real safeguard. The Bank Directors would not like to face either the Chancellor of the Exchequer or Parliament with a request for extraordinary legislation unless they could show that they had taken every measure which prudence might dictate to avoid such a step. If they lightly took the consent of the legislature for granted, if they treated the suspension of the statutory limit of note issue as anything but a last resort, public opinion would condemn them, and the unique position which the Bank has gained for itself might be threatened. Thus we are led to the paradox which has been generally recognised as the real defence of the Act of 1844. The benefits of that Act are only felt when it is broken or suspended. This paradox is really only one application of the truism, that gold reserves exist to be *used*. It is futile to establish a rule to secure the accumulation of a gold reserve in support of the legal tender note issue, unless, when urgent need arises, the gold can in the last resort be released. It is true that the intention of Peel and of those who assisted him in framing the Act of 1844, was rather to prevent the use of an unlimited note issue to stimulate a credit expansion, but Peel himself admitted after the crisis of 1847 that its real merit was to be found in the accumulation and preservation of a large stock of gold which could be made available by a suspension of the Act.

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[1] See an answer given by Mr. Asquith in the House of Commons on the 9th November, 1915.

And wherever an automatic system of note issue is established, such as that with a fixed fiduciary issue, the unexercised legal power of issue provides the normal reserve of the central bank, while the gold reserve held against the notes actually issued provides a second line reserve, only to be used as a last resort.

Let the fiduciary limit be suspended, and the Bank forthwith gains an unrestricted power of paying its depositors in notes, without regard to the amount of reserves it has chosen to maintain. Seeing that the Bank could not in any circumstances be allowed to refuse to pay its depositors, the suspension of the limit at need is really implicit in the system. A deposit at an ordinary bank is payable in cash conditionally on the solvency and liquidity of the bank. The liquidity of the Bank of England is secured by its power of printing notes, and the interchangeability of its deposits with cash is absolute. Upon that fact ultimately depends its position as the bankers' bank.

During the war the operation of the fiduciary limit was almost entirely nullified by the unrestricted issue of currency notes, under the Currency and Bank Notes Act, 1914. Though the notes are issued by the Treasury, they are issued through the Bank of England. Originally they were issued only by way of advances to banks. But the banks were allowed to repay the advances by transfers of credit, leaving the notes in circulation, and soon the notes came to be issued in unlimited quantities in exchange for deposits at the Bank of England. This development did no more than recognise the logic of the situation.

After the war, on the recommendation of the Committee on Currency and Foreign Exchanges, of which the late Lord Cunliffe was chairman, a provisional limit on the issue of currency notes was imposed. The system was the same as that of the Act of 1844, a fixed fiduciary limit. Till a permanent settlement could be made, the limit was to be fixed afresh each year, and was to be the *actual* maximum uncovered circulation in the preceding year. The limit was first imposed by a Treasury Minute of December, 1919, and came into operation on the 1st January, 1920. The limit for 1920 was £320·6 millions. For 1927 it is £246 millions. It has no *legal* validity, but is merely an expression of intention by the Treasury as the note-issuing authority.

For the purposes of the Treasury Minute the uncovered issue means the notes not covered by either gold or Bank of England notes.[1] The practice of placing Bank of England notes in the Currency Notes reserve was suggested by the Cunliffe Committee. Since the resumption of the gold standard in April, 1925, gold has been wholly replaced by Bank notes in the reserve. The Currency Notes reserve is linked with the Bank of England reserve just as effectually as by the use of gold, because the transfer of Bank notes equally diminishes the reserve in the Banking Department of the Bank of England.

The whole system of the fixed fiduciary issue has ceased to have binding statutory force, and has passed under the discretion of the Government. Not only is the limit on the currency note issue a purely executive act, but the limit imposed on the Bank of England note issue by the Act of 1844 can be waived at the discretion of the Chancellor of the Exchequer. With his leave the Bank could dispose of its entire gold holding. This power was conferred in 1914 by the Currency and Bank Notes Act as an emergency measure. The Cunliffe Committee have recommended that it should be permanently retained when a fixed fiduciary issue is established by new legislation for the entire note issue, but that the suspension of the limit should be accompanied by formalities to mark it as exceptional.

The fixed fiduciary issue adopted in the Bank Charter Act of 1844 was widely imitated. But its rigidity was found unsuitable in Continental countries, where paper money had not been replaced by bank credit in the making of payments and holding of balances to so great an extent as in England, and modifications were introduced into it.

Sometimes, where the principle of the Act of 1844 has ostensibly been imitated, with apparently slight modifications, the note issue is, in practice, not rigid but almost completely elastic. When, in 1873, the old Bank of Prussia was wound up and merged in the new German Reichsbank, a symbol of the newly-won unity of Germany, the principle of a fixed fiduciary note issue, supplemented with an unlimited issue against cash, was adopted. But to avoid the illogical English plan of a law which is only useful when it is broken, the Bank was to be allowed to exceed the limit, subject to the payment of a tax at the rate of 5 per cent. per annum on the excess. The tax was intended to mark out the exceeding of the limit as something exceptional, and for the first twenty years of the Bank's existence the limit was indeed very rarely exceeded. But in spite of successive increases of the fixed limit itself, the occasions on which it was exceeded became more and more frequent, and before 1914, had ceased altogether to be exceptional. Especially at the end of each quarter, when there is a general settlement of accounts, which requires the temporary circulation of a larger amount of currency than at other times, there was almost invariably an excess on the limit, notwithstanding that in order to meet the special conditions an amendment of the law had fixed a higher limit at and near those dates. If the unexercised right of issue beyond the fixed limit was to be regarded as the reserve of the Reichsbank, then this reserve was as often a negative as a positive quantity. In practice the Reichsbank issued notes in the discount of bills or in advances to traders with almost as free a discretion as the Bank of France, which was subject to no legal restriction on the amount of its note issue, except a maximum limit which was regularly raised by fresh legislation as soon as it was approached. In avoiding the anomaly of the English suspensions of the Bank Act, the Germans lost the special advantages of the system embodied in that Act, in that the transgression of the limit ceased to be exceptional.

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[1] Silver coin is not eligible as cover, but is classed along with securities. A currency note, not being a debt, has never been redeemable in silver.

An alternative to the principle of the fixed fiduciary issue is that which requires a *fixed proportion* of the note issue to be covered by gold. Its adoption in the American Federal Reserve Banks has brought it into fashion wherever Central

Banks of issue are being constituted or remodelled. The Federal Reserve Banks are required to hold 40 per cent. of their note issues in gold (as well as 35 per cent. of their deposit liabilities in gold or other lawful money). The German Reichsbank, under its new statutes of 1924, must keep a 40 per cent. reserve against its note issue, but one-fourth of this reserve may be in foreign exchange instead of in metallic gold. Several other recent examples could be cited.

The advantage of the fixed proportion is that it enables the Central Bank to cover temporary or seasonal fluctuations in the internal demand for currency with a smaller margin of gold. If the maximum circulation exceeds the minimum by, say, £30,000,000, then with the fixed fiduciary issue it is necessary either to hold £30,000,000 more gold than would be necessary for other requirements at the time of minimum circulation, or to increase the gold reserve as the circulation expands to the maximum. With a fixed proportion reserve of, say, one-third, the requisite gold would be only £10,000,000.

On the other hand, when the internal demand for currency is increased not by any temporary or seasonal cause, but by a credit expansion, this economy of gold is an actual danger. It permits the expansion to go further before it is checked.

The importation of a given quantity of gold permits a greater credit expansion with the fixed proportion reserve than with the fixed fiduciary issue, and when a credit expansion has gone so far as to cause an export of gold, the contraction required to keep the note issue within the legal limits is more violent.

The exchange of notes for gold and gold for notes leaves the fiduciary issue unaffected. But the issue of notes for gold increases the proportion of reserve to note issue, while the issue of gold for notes decreases the proportion. In fact, when the proportion is prescribed by law, if once it has reached the legal limit, no more notes can be redeemed in gold without reducing the proportion below the limit. If the proportion is one-third, and a reserve of £40,000,000 is held against a note issue of £120,000,000, the redemption of £3,000,000 of notes would reduce the reserve to £37,000,000, whereas a note issue of £117,000,000 would require a reserve of £39,000,000.

Therefore, the Central Bank cannot afford ever to let the actual reserve sink to the statutory proportion, but must always hold an *additional* gold reserve.

As soon as we begin to take account of the discretion and foresight of the Central Bank, the differences between the two forms of reserve law sink into the background. With the fixed fiduciary issue the Central Bank must still keep an additional gold reserve to meet export demands. Otherwise any withdrawal of gold for export would necessitate the redemption and cancellation of notes required for internal circulation. The banks would thereupon borrow from the Central Bank, which would be faced with the alternatives of refusing to lend or of exceeding the fiduciary limit.

But if so much reliance has to be placed on the prudence and discretion of the Central Bank, is it really necessary to impose on it a reserve law at all? A Directorate which is competent so to regulate credit that not only will the convertibility of the paper currency into gold be maintained, but there will be a sufficient margin of gold always in hand beyond the legal requirements, might be trusted out of leading strings to maintain convertibility without legal reserve requirements.

The earliest reserve law was that imposed by the Act of 1844. The justification for it was that in the preceding twenty years the Bank of England, unrestrained by any reserve law, had twice let the gold reserve fall dangerously low (in 1825 and 1839). But the explanation of these lapses, as we can now see, was that the technical methods of credit control had not then been discovered. The first tentative effort to check a credit expansion by means of a rise in Bank rate was made in 1839. In 1847 more reliance was placed on this instrument, and the Government endorsed the use of it when they made the suspension of the fiduciary limit conditional upon Bank rate being kept at not less than 8 per cent.

Since then theory and experience have combined to accomplish a great advance in the practice of credit regulation.

The blind empiricism of 1844 has become obsolete. Yet reserve laws are almost everywhere imposed on Central Banks. A reserve law in effect places a statutory prohibition on the use of a great part of the gold reserve, whatever the emergency, and the prohibition is usually mitigated by the grant of a dispensing power either to the Government, as under the Currency and Bank Notes Act, or to some other authority, such as the Federal Reserve Board in America.

The dispensing power divides the responsibility, and the reserve law so modified remains an elaborate piece of obstruction designed to discourage the Central Bank from using its gold. And all the time the characteristic fault of Central Banks is an excessive reluctance to part with gold. This reluctance is to be seen at its greatest in the Bank of France, which has never had a reserve law.

When paper money is available in all denominations above those of the subsidiary coin, and is in general use, gold reserves are only required for export. If the law prescribes that a certain gold cover be held against the note issue, that is only a device for securing that an adequate gold reserve shall be accumulated. So long as the paper money is convertible into gold coin, however, it is not *certain* that gold will not be withdrawn for internal circulation. It was Ricardo who first proposed a plan for making paper money convertible into gold and yet precluding the use of gold coin. He recommended that the Bank of England should not be obliged to pay coin for its notes, but should sell gold bars at a fixed price to all comers. Thus anyone who desired gold for export could obtain it, and the Bank of England note would be kept up to parity with gold. The Act embodying Ricardo's plan did not come into effective operation (see below, p. 341). But the plan has been revived in the Gold Standard Act of 1925, which suspends the free coinage of gold and the convertibility of Bank of England notes and Currency Notes into gold coin, and requires the Bank of England to sell gold bars (of approximately 400 fine ounces) on demand at the coinage price of £3 17s. 10½d. a standard ounce. Thus withdrawals of gold from the Bank will only be for export or for industrial use and not for internal circulation. The Bank remains obliged under the Act of 1844 to *buy* gold at £3 17s. 9d. an ounce.

A further refinement of the same principle is what is known as a Gold Exchange Standard. People who withdraw gold for export do so in order to obtain credits in exchange for the gold in foreign countries, and it would suit them just as well if the Central Bank could give them credits in those foreign countries instead. The Central Bank therefore holds, in place of a part of its gold reserve (or even of the whole), liquid resources in suitable foreign financial centres, where the currency is convertible into gold. By selling these external resources at a fixed price instead of gold, the Central Bank makes the currency convertible into foreign currencies; by buying foreign currencies at the same price (or a price fractionally lower) it completes a system which maintains the currency unit practically at par with the foreign currencies, and therefore so long as they are equivalent to gold, with gold.

There are thus three distinct types of gold standard to be distinguished. One, which may be called a Gold Specie Standard, is based on the free coinage of gold, paper money being convertible on demand into gold coin. The second, which may be called a Gold Bullion Standard, is based on the obligation of the Central Bank to buy and sell gold bullion at fixed prices. The third is the Gold Exchange Standard, which is based on the obligation of the Central Bank to buy and sell exchange on one or more gold-standard countries at fixed prices. The two former link the currency directly to the world market in gold. The third does so only indirectly. An exchange standard is parasitic upon the standard of another country. If the currency on which it is based ceases to be kept at parity with gold, it ceases to be a gold standard. When the pound sterling fell below gold parity, the currencies linked to it, such as those of Egypt and the Straits Settlements, fell with it. Those of India and Siam, which had been linked to it, were allowed to appreciate.

The gold exchange standard has the great advantage of economising gold. To a country which adopts it that means the direct gain of substituting interest-bearing assets for a part of the sterile gold reserve. But the economy of gold has wider aspects.

The wealth value of gold is determined, like that of any other product, by supply and demand. Of demand the principal constituent is the demand for monetary purposes. If the demand for monetary purposes is reduced first by the elimination of gold coin from circulation, and then by the abandonment of gold reserve laws and the adoption of devices which enable the Central Banks of issue to get on with smaller reserves, the effect will be to diminish the wealth value of gold. Thus the reserve laws may be regarded as a method of maintaining the wealth value of gold by creating a conventional demand for it. That is no part of their ostensible purpose, but economy of gold, however attractive it may be to the country which profits by it, will be no benefit to the world if it means a general and indefinite depreciation of all gold currencies in terms of products.

What is desirable is not the indiscriminate abandonment of the old gold reserve conventions, but the regulation of gold reserves by international agreement with the express object of preventing either a rise or fall in the wealth value of gold. The resolutions adopted at the Genoa Conference in 1922 promise a plan of international co-operation on this basis.[1]

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[1] See my *Monetary Reconstruction*, pp. 122-38.

CHAPTER VII.

INTERNATIONAL CURRENCY MOVEMENTS.

At the root of nearly all currency problems is to be found that inherent instability of credit which we analysed in Chapter I. In Chapter II. we showed that, if an excessive expansion of credit occurred in a country which depended on gold for its supply of money, the whole structure of credit might collapse from the exhaustion of all surplus supplies of legal tender. The grounds for this conclusion were twofold. First, though the consumers' income is increased, the part composed of wages is not immediately increased in proportion, and even when wages do rise, the amount of cash continuing in circulation, the cash portion of the unspent margin, only grows gradually. There is thus a long interval between an increase in the quantity of credit and the corresponding increase in the circulation of money. Secondly, the increase in the consumers' outlay tends to deplete stocks of goods, orders are given for the replenishment of stocks, there supervenes an over-pressure upon the productive powers of the country and an accumulation of orders awaiting execution, and this accumulation of arrears of orders constitutes a latent demand for credit, which will only materialise when the arrears begin to be overtaken. The result is that when trade is stimulated in this way, the proportion of cash reserves to liabilities shown in the bankers' balance sheets becomes misleading. Apart from any fresh stimulation of trade, commitments already exist which are destined to produce a drain of cash and an insistent demand for new credit.

How is this danger affected by the foreign exchanges? At first sight it appears to be accentuated. The depletion of stocks and the rise of prices make the country a good market to sell in and a bad one to buy in. Imports are increased, exports diminished, a balance becomes due to foreign traders, the exchanges become unfavourable, gold is withdrawn for export. Thus to the drain of gold for internal circulation is added a drain of gold for export. But far from increasing the danger of a banking collapse, this foreign demand for gold greatly facilitates the task of the bankers, for it gives them an earlier warning. We saw in Chapter IV. that a stimulation of sales and a rise of prices are among the first results of a credit expansion. They are signs of an increase in the consumers' outlay, and this in turn is directly and immediately caused by the acceleration of the creation of credit. The acceleration may be considerable at the very outset of the credit expansion, and the attraction of imports and the curtailment of exports will begin at once. There is a rise in the aggregate demand for goods and services, as measured in the monetary unit, and this increased demand produces a general rise in the prices of goods and services, and in particular in the prices of foreign currencies which give a command over foreign commodities. But when all the countries concerned have an effective gold standard, the prices of foreign currencies cannot rise above the export gold points, and the prices of foreign trade commodities are kept down. There is a virtual depreciation of the currency, an adverse balance of payments results, and gold is exported. The country which exports the gold finds its surplus reserves thereby reduced; that which receives the gold finds its reserves increased. Both will turn round and look at the working of their currency arrangements. The one will be led to contract credit, for fear of its gold reserves being altogether denuded; the other will be led to expand credit to avoid accumulating a plethora of idle and therefore useless gold. If this contraction and this expansion of credit did not occur, the disparity between the monetary units of the two countries would remain, and the flow of gold resulting from this disparity would persist unabated. The depletion of the reserves in one country and the increase of those in the other would continue progressively. In fact, the longer the adjustment of credit is postponed, the more urgent it becomes. In practice early action is the rule. The banking community in any highly-developed country is afraid of a loss of gold, and any seriously unfavourable movement of the exchanges (unless it be explicable by some cause which is known to be temporary and limited in its operation) is the signal for a prompt contraction of credit. The contrary event of a gain of gold presents an opportunity for that expansion which is the natural tendency of credit in so far as it is not restrained by being harnessed to a metallic standard.

Any country which indulges in an expansion of credit in which its neighbours do not participate tends to lose gold, but this leads it to curb the expansion, and the gold which it exports forms the basis of an expansion in other countries. In the same way a country which is the scene of a credit contraction tends to gain gold, and the countries from which this gold comes have themselves to contract credit.

To suspend the payment of paper money in gold is to remove gold from the exceptional position which it holds as having a fixed price in terms of the money of account. There is no longer any reason why the price of gold should not rise along with the prices of other commodities. There may be gold coin in circulation which can be collected and exported, and which will still provide a source of supply at the coinage price for a time, and even when gold payments have been suspended, the price of gold may still not exceed the coinage price, provided that the supply of credit and paper money is so restricted that the wealth value of the monetary unit, as determined by the quantity theory, does not fall. But the *automatic* regulation of the value of the unit no longer works, and its value can only be maintained by a proper control of credit. It is by this control of credit that the gold movements themselves are regulated when credits are freely convertible into gold, and it is the universal aim in regulating currency to avoid the suspension of gold payments by means of a timely contraction of credit whenever a serious loss of gold is threatened.

It might be inferred that this regulation of credit so as to avoid the withdrawal of gold would be the solution of all difficulties, that the foreign exchanges would invariably give early warning of an undue tendency to credit expansion, and that the expansion could thereupon always be checked. But this solution of the problem is inadequate, because it leaves out of account the case of a *universal* expansion of credit, common to the entire gold-using world. However great the expansion of credit and the rise of prices may be in one country, there will be no loss of gold if there be an approximately equal expansion of credit and rise of prices everywhere else. The general employment of the gold standard, combined with the systematic regulation of credit, does not prevent expansions and contractions of credit, but merely secures that they shall be approximately equal and simultaneous everywhere. A movement of gold from one country to another is simply a sign that they are not exactly keeping pace. One lets credit expand a little faster than the others and loses gold; another lags behind and receives gold.

But if the whole gold-using world be regarded as a single economic unit, it suffers from just the same dangers as we have already traced in a single country. It is threatened by the inherent instability of credit, and when a credit expansion occurs, the dangerous latent demands for cash and credit come into being in a greater or less degree in every country which participates in the movement. When the latent demand for cash becomes actual, the turning-point is reached. The banks become sensible of a growing drain of legal tender money into circulation, which is in reality the consequence of their too lavish creation of credit long before. They endeavour to contract credit, but are confronted with the apparently insatiable demands of manufacturers and merchants, who are committed by contracts already concluded to produce or buy goods, and who cannot fulfil their engagements unless they borrow. In coping with this situation no country can expect help from any other, since all are in difficulties.

Nevertheless, different countries may be affected in widely different degrees. The credit expansion is spread abroad through the channel of the foreign exchanges, and any cause which happens to affect the foreign exchanges in any particular country will affect its susceptibility to the movement. The principal causes of which account has to be taken are: first, changes in the production of foreign trade commodities, which alter the balance between exports and imports; and, secondly, capital movements. Examples of both were given in Chapter V. A failure of the harvest, or any similar falling-off of production, will tend to make the foreign exchanges unfavourable, and if credit conditions abroad were stable, would occasion an export of gold and a contraction of credit. But as credit is expanding in foreign countries, these effects may be wholly or partly counteracted. The disparity of exports and imports that would otherwise be caused by the shortage of production is simply corrected by the increased demand in foreign markets, which import more and export less. On the other hand, a country which has an exceptionally good harvest, or is for any other reason producing more than usual, will tend to go ahead of the general expansive movement. It may either import gold, or may expand credit up to a higher relative level than its neighbours.

If these conditions of production are transitory, and come to an end before the process of expansion in other countries has ceased, the countries which experience them must thereupon take measures to get into step with their neighbours. That in which production has been short will expand credit when production is restored. That in which production has been bountiful must contract credit when production falls off again. But, of course, the world expansion of credit must sooner or later come to an end, and at that particular moment there are likely to be some countries which happen to be producing either more or less than usual. Their position will be very materially affected by this circumstance, but in the present chapter we shall not consider the conditions attending a world-wide contraction of credit.

There is one class of cases where production is itself affected by the existence of a credit expansion. When credit and money are plentiful, and prices rising, and the whole world feels itself prosperous, the effect on the demand for different kinds of commodities may be very unequal. The demand for luxuries may be stimulated more than that for necessaries, the demand for manufactured goods more than that for food. A country which specialises in the production of goods, the demand for which is stimulated more than the average, will be in the same position as if it were enabled to produce more, for, even apart from the probable increase of the output of these goods, the money value of a given output will be increased. This is true not only of manufacturing countries but of countries which produce the raw materials of manufacture. India, for example, was very greatly affected by the trade expansion of 1906 and 1907, largely on account of the exceptional demand for jute. The manufacturing activity of the world was accompanied by a great demand for sacks, etc., the raw material for which could not be indefinitely increased at a moment's notice. India, as the great jute producer, reaped the benefit, but paid the penalty, when the crisis supervened, in a very severe strain upon her currency system.

But the most important class of production which ebbs and flows with the contractions and expansions of credit is the production of fixed capital.

This opens up the whole question of capital movements, to which up to now we have only given passing notice. We have shown, indeed, that investment is expenditure, and that the initiative in this expenditure rests not, as in the case of goods, with a merchant, but with the promoter who plans the use of the fixed capital or other product, which will be the outcome of the expenditure. The financing of capital expenditure is much more complex than the financing of trade. Traders may, of course, apply their own savings to extensions of their capital, or may borrow by private arrangement from people who have capital to spare. Often banks make advances for extensions of plant or other fixed capital, in anticipation of the borrower's savings over some years or of a future capital flotation. But under modern conditions the greater part of the investible savings of the people flows into the investment market, the Stock Exchange or Bourse, as it is called. It is the business of the dealers in investments, who compose this market, to supply securities to the investing public, and just as the dealer in goods always has on hand stocks of goods, so the dealer in investments has on hand stocks of investments. And the latter dealer, like the former, holds a part of these investments with borrowed money. The dealer in investments makes his profit partly out of a commission on the purchase and sale of securities for his client, partly by using his special knowledge of securities to buy them cheap and sell them dear on his own account.

The stock of securities which is being perpetually absorbed by the investors must be replenished. It is replenished by new issues, and it is in bringing out new issues that capital expenditure is really initiated. The promoter of capital expenditure sees the transaction from the point of view of the borrower. He may be himself a trader extending his business, or he may be floating a new company, or he may be acting on behalf of a Government or municipality. His motive is to be found in the existence of an opening for investment; he approaches the investment market with an offer of a future income in return for a present expenditure. This future income may be derived either from the profits of the venture or from the proceeds of taxes pledged by a borrowing Government. Now there is no necessary equality or even approach to equality between the demands of promoters and the quantity of money available for investment, and it is one of the most important functions of the investment market to equalise the two. The investment market receives money in return for securities from the investors, and pays money in return for new issues to the promoters. If the former transactions exceed the latter, its stock of securities is diminished and its indebtedness to the bankers is correspondingly lightened; in the contrary case, its stock of securities and its indebtedness are both increased. The market guards itself against the one contingency by raising and against the other by lowering the prices of securities.

If the prices are not lowered far enough to check an excessive flow of new issues, the result will be that some of the new issues will not be fully subscribed. A promoter can guard against this risk by finding underwriters, dealers, that is, in the investment market, who will undertake to subscribe for any portion of the issue not taken by the investing public. Underwriters will demand a commission of so much per cent. on the whole amount of the issue for assuming this liability.

If the supply of new issues outstrips the supply of savings, the result is that underwriters find that they cannot dispose of the securities for which they have made themselves responsible. Being loaded up with securities which are, at any rate for the time being, unsaleable, they are reluctant to do any more underwriting business, and this reluctance takes the form of charging more onerous terms. Promoters have to pay a higher commission, and to float their new issues at lower prices.

When credit is expanding and trade is active, the trade of the investment market is more active than any other. The consumers' income being enlarged, the surplus available for investment is enlarged more than proportionately, and the receipts of the investment market are swollen. At the same time, trade being profitable, and producers everywhere endeavouring to increase their output, all the openings for new investment become more attractive than before. This is the promoter's opportunity. Just when he can use the investors' money there is plenty of it to be had. When credit contracts again, the supply of savings will fall off and the openings for investment will become less profitable.

It may be objected that experience does not altogether confirm this, and that a time of trade activity is often found to be specially unfavourable to the underwriter's business. But (except when the expansion of credit has in reality already begun to give place to a contraction) the underwriter's difficulties are confined to the floating of securities bearing a *fixed* rate of interest. Both the borrowers and the underwriters are slow to realise that when trade is active they have to meet a very formidable competition from commercial and industrial shares, which set an altogether higher standard in the investors' expectations of yield. A Government or municipality, which has borrowed at 4½ per cent. at a time of quiet trade, is surprised that the underwriters cannot even dispose of an issue of 5 per cents. at a time of active trade. The inference is hastily drawn that there is a scarcity of money, whereas the fact is simply that profits are high and 5 per cent. has become unattractive. The real troubles of the investment market come when the time of active trade stops and profits become low again. The gilt-edged securities will then be relieved of the embarrassing competition from which they have suffered (though even they may not recover at once —see Chapter X.), but whatever relief is given to the underwriters responsible for those issues will be as nothing to the new difficulties of those who have taken charge of speculative shares. As to what occurs at the transition from one state to the other, that will engage our attention in Chapter IX. Here we are concerned with the effect of capital movements upon the relative progress of a credit expansion in different countries. For the present we will leave aside one of the most important classes of capital movements—that is to say, war borrowings—for war finance is a subject which demands separate treatment.

So far as investment for the purpose of economic development (whether through Governments or through private enterprise) is concerned, most of the openings are to be found in what may be broadly called " new " countries, while the greater part of the supply of savings accrues in the " old " countries. Old countries go on steadily increasing their stock of capital to keep pace with the growth of their population, commerce, and industry, and to equip themselves with the latest appliances. But their demand for fixed capital is moderate compared with that of a half-developed country, which is still short of railways, harbours, roads, industrial machinery, buildings, etc., in comparison with its natural resources. Consequently there is an export of capital from the old countries to the new. This export of capital is very much stimulated when credit expands, and it shrinks again when credit contracts. But as we saw in Chapter V., borrowing from abroad makes the exchanges favourable and lending makes them unfavourable. Consequently, when credit is expanding and the new countries borrow more than usual, they find the exchanges favourable, and have the choice of importing gold or indulging in a greater expansion of credit than their neighbours. When credit contracts and they borrow less than usual, they lose gold and have to effect a greater contraction of credit than their neighbours. And apart from this general tendency for foreign investment to rise and fall as credit expands and contracts, there may also be fortuitous movements of capital, due perhaps to the needs of Governments being met by large foreign loans or to new openings being suddenly discovered and attracting a rush of foreign capital to develop them. Thus it may happen that the foreign borrowings of a particular nation are at a maximum when those of others are at a minimum. These fortuitous borrowings are presumably transitory, and there is no reason why they should synchronise with credit movements.

Even purely domestic capital movements may have an influence on the degree of credit expansion that takes place in a particular country. Credit may be expanding more then abroad, and the consumers' outlay be correspondingly swollen, but if the surplus of the consumers' outlay is applied to additional investment at home, and not to the purchase of goods or investments abroad, there need be no adverse tendency in the exchanges. The exceptional volume of investment at home will no doubt to some extent divert capital and labour from the production of goods for export, and a shortage of exports would have the same effect as an excess of imports. But this need not appreciably affect the position, and, indeed, the diversion of purchasing power from the purchase of commodities to investment might be so great as to counteract it altogether.

One of the most important of all the factors which go to determine the part played by any country in a world credit expansion will be its own credit policy.

The amount of gold which a country must absorb in order to permit of a given expansion of credit depends upon its currency system. As the expansion progresses, each country which participates in it will presently experience an increased demand for money for internal circulation. If the law permitted, the whole of this demand might be met by unsupported paper money, and the whole of the stock of gold would still continue available for export if required. But the law may prescribe a relation between the paper money and the gold reserve held against it, and it may prohibit the issue of notes below a specified denomination, so that some of the demand must be met by the issue of actual gold coin. All the gold needed to provide directly or indirectly for these additional supplies of legal tender money will be subtracted from the stock available for export.

A general credit expansion occurs when the gold-using countries as a group hold surplus gold in reserve, that is to say, their gold reserves in the aggregate exceed what prudence and policy require for their note issues and the credit structure generally. The surplus gold will not in general be equally distributed, but those countries which have the relatively biggest shares of it will take the lead in expanding credit. They will get rid of it, partly by the increased demand for internal circulation, and partly by export to those countries which have not expanded credit or have not expanded it so much. But these latter, when they receive the gold, will expand credit in turn till they begin to export gold. The redundant gold can in the end only be absorbed through the demand for internal circulation in the various countries of the group ; apart from that it must be passed on from one country to another, starting credit expansions in each of its resting places in turn. Any country which expands credit a little too fast and loses more gold than it can spare will have to contract credit. But so long as there are still stocks of redundant gold somewhere, a contraction of credit in one or two countries which have run short need not lead to any interruption of the expansive tendency. It is when the demand for internal circulation throughout the gold-using group has so grown as to use up *all* the redundant gold, either for circulation or for reserves, that the expansion of credit must cease and a contrary movement set in.

The rate of progress of the whole system towards this climax depends on the currency laws of the different countries.

If the paper money in circulation is regulated everywhere on the principle of the fixed fiduciary issue, any increase in the currency, whether gold coin or paper, will necessitate an equal absorption of gold. The absorption of gold for a given credit expansion will then be a maximum, and the credit expansion required to absorb a given amount of surplus gold will be a minimum.

With the proportional system of gold reserves, if all the gold-using countries have currency laws requiring one-third of the note issue to be covered by gold, the effect will be that, in order to absorb a given amount of surplus gold, there must be an addition of three times as much to the note circulation, and a correspondingly greater credit expansion must be brought about.

When the turning-point has been reached, and the latent demands for cash and credit begin to be felt, gold reserves begin to fall below the prudent limits. In some countries the legal limits may be infringed, in others the margin above the legal limit will be dangerously reduced. Then, in order to get back to safety, there must be a general contraction of credit. The contraction of credit releases gold by reducing the currency in circulation in the group of gold-using countries. With the fixed fiduciary issue, a given contraction of the currency sets free an equal amount of gold; with the proportional reserve, it sets free gold equal only to the prescribed proportion.

It is here that the real superiority of the fixed fiduciary issue is made plain. In so far as countries adopt it, it tends to restrict the extent of both expansions and contractions of credit.

The advantage, however, belongs not to the particular countries which adopt it but to the whole group. Those which have a more elastic system will begin to contract credit more severely, but they will thereupon import gold from their more conservative neighbours.

It was pointed out in Chapter VI. that the proportional reserve is more convenient for meeting temporary or seasonal fluctuation. But when we are considering not a single country but an international group this advantage is very much diminished. In virtue of the law of averages the casual variations in the demand for currency in a group of countries are less than for any one of them.

Seasonal variations are a special case. They have two distinct aspects. On the one hand, every agricultural community experiences certain monetary tendencies when the crops are harvested. On the other, the foreign exchanges between the countries which export agricultural produce and those which import it are affected when the crops are in course of being shipped. The dealer in agricultural produce, like other traders, borrows when he buys and repays when he sells. The farmers' expenditure accrues gradually from one harvest to the next. An entire year's produce becomes available at the harvest and thereafter is handed on to the dealers, who hold it while it is gradually passing into consumption in the interval up to the next harvest.

If the farmer economised balances by borrowing and repaying there need not be any seasonal effect on the currency. The farmers would be increasing their indebtedness throughout the year while the dealers would be selling produce and paying off indebtedness with the proceeds.

But in practice the farmer is often unable to take full advantage of banking facilities. Agriculture is essentially a decentralised business. Farmers in many countries habitually receive the proceeds of sale of their crops in money or bank notes. And even where the farmers themselves have banking accounts their labourers receive additional pay at harvest time and absorb money. In some countries (Canada and India, for example) express provision is made in the banking laws for increased note issues during the busy season.

Exports of agricultural produce need not necessarily be concentrated in the period immediately following the harvest. Indeed, the importing countries do not need the produce till their own production is exhausted in the intervals just before their own harvests. Where exporters and importers are in the same hemisphere and have approximately contemporaneous harvests, there is a wide choice as to the precise time at which the produce shall be shipped.

The tendency is for the importing countries to be financially the stronger. The produce is shipped soon after harvest, and the dealers in the importing countries have to pay the producers for it. The exchanges become favourable to the exporting countries and unfavourable to the importing countries while payment is taking place. If no compensatory cause were at work, gold would pass, and the whole temporary excess of imports might be paid for by the importing country with gold which would be sent back to it in the interval before the next crops. The seasonal movement of gold to and fro would be a clumsy and expensive expedient. It could be prevented if credit were contracted in the importing countries and expanded in the exporting countries, but that could only be done at the cost of unsettling the whole course of business in both.

In the period before 1914 a solution was found for this problem in the big staple export trades from the United States to Europe. The seasonal movement in the exchanges had become so regular, that in the spring, when American exports were at their lowest and there was a premium on sterling, American bankers made a practice of drawing bills on London correspondents, timed to mature in the late summer or autumn, when the marketing of the crops would produce ample supplies of sterling. By so doing they in effect used the resources of the London money market to finance the American producers in the interval before the harvest. The discrepancy between exports and imports was met by a lending operation instead of by the transmission of gold.

CHAPTER VIII.

THE MECHANISM OF FOREIGN EXCHANGE.

UP to this point we have assumed credits in one place to be exchanged for credits in another, without inquiring too closely into the means by which such exchanges can be effected. We saw, indeed, in Chapter V. that a bank dealing in exchange between two places must have establishments in both. For, in order that a debt may be transferred from one place to another, there must be a debtor in each. If a customer of the bank with a credit in one place wants to receive instead a credit in the other, the simplest means of remittance is a message between the two offices of the bank. At the one office the customer's account is debited with the sum to be remitted, and the message instructs the other office to credit him with the corresponding sum. The bank's indebtedness to a customer remains on the whole as before, except that a part of this indebtedness is due in a different *place*, and in a different *currency*. The customer can then draw on the new credit he has received, and use it as the means of payment in the place where it is due.

This simple form of remittance is the principle of the letter of credit. It has become common also in modern times in the form of the telegraphic transfer.

Historically, however, remittances originated in a much more complicated machinery, the bill of exchange. The reason why it is complicated is that the bill of exchange is at the same time a means of remittance and a means of borrowing.

Bills of exchange are not used only for international transactions. They are also used, and very extensively in some countries, for financing purely domestic trade. A bank lends money to traders who are engaged in the production and sale of goods. If the borrower is an ordinary customer of the bank, and the banker knows his affairs, the money may be lent to him by way of an advance or overdraft, for which he might perhaps furnish some sort of collateral security. But a loan of this kind is subject to the disadvantage, from the banker's standpoint, that the creditor cannot easily assign his rights in it to some one else. Bankers like to hold as large a portion as possible of their assets in what is called "liquid" form; their liabilities are nearly all liabilities to pay money on demand or at short notice, and if a considerable portion of such liabilities happen to be enforced simultaneously the bankers must realise a part of their assets in order to meet them. Advances to customers may be perfectly good assets, but they will not supply the banker with any ready money till they become due for repayment. And the bank may find a difficulty in borrowing unless it can deposit as security some assets which can be easily assigned away to the lender. A mere acknowledgment of indebtedness from the bank's debtor would meet this requirement. But many borrowers are traders in a small way, whose affairs and whose names are unknown except to their bankers and the few traders with whom they have dealings. The credit of a small grocer in a country town may be in itself unimpeachable; he may be less likely to default on any of his debts than a financial house of world-wide reputation; but still his name on a promissory note will carry no weight except with people who know enough of him and his affairs to believe that they can trust his solvency and his honesty. But if two different traders are concerned in a transaction for which it is desired to borrow, each knows something of the affairs of the other, and the credit of each will reinforce that of the other. If both make themselves responsible for the debt, the security for the debt becomes very much better, for not merely is the chance of both becoming insolvent less than the chance of only one becoming insolvent, but the mere fact of either having pledged his credit for the debt shows, if the transaction is genuine, that he at any rate believes in the solvency of the other.

If the purchaser of some goods wants to arrange for the purchase money to be borrowed on the joint credit of himself and the vendor, he can invite the vendor to "draw a bill upon him" for the amount. The vendor then writes out a document ordering the purchaser, who has become his debtor for the value of the goods, to pay the money, at some specified future date, to the man who is to lend it, the date of payment being fixed of course according to the period for which it is desired to borrow. To give the document its full validity the person on whom it is drawn (in this case the purchaser of the goods) must signify his acceptance of the liability so imposed upon him; in the technical phraseology, he must "accept" the bill, by writing his name on the face of it.[1] Otherwise there would be no evidence on the document itself that the purchaser had ever given the vendor authority to order him to pay at all. A bill is a negotiable instrument. The original lender of the money can assign his rights in it to another person by merely writing on it and signing a direction that the money be paid to this other person instead of to himself (i.e. "endorsing" it to him); and the new holder of the bill can then endorse it on to some one else, and so on. So long as the bill and the signatures on it are genuine, each holder becomes absolute owner of the rights represented by it; he is under no legal obligation to satisfy himself that he is receiving it from honest hands. But every holder who sells the bill by endorsing it to some one else is regarded as guaranteeing the payment of the money when it becomes due, and if the drawer and acceptor, and the other endorsers all fail to pay, he may be compelled to pay it himself. Thus every signature on a bill gives an additional guarantee of its payment, and when it has been several times endorsed the security for ultimate payment becomes very good.

Often the purchaser of the goods would not invite the vendor to draw upon himself but upon his banker for his account. The banker's credit, which is probably better than that of any merchant, would then be brought in to support the bill. The essence of the transaction in that case is that the purchaser is given a credit by his banker which may be drawn on at the appropriate future date, and whether he draws on this credit himself or authorises the vendor to draw upon it is a mere detail. Where the bill is drawn to finance an actual purchase of goods, the latter course is adopted ; the bill can thus be drawn at the very time the goods start, and for the exact sum due. Bills drawn for other purposes ("finance bills") are often drawn like cheques by the person to whom the credit is granted.

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[1] The acceptor is therefore the principal debtor, the person on whom the bill is drawn. He may also be called the drawee. Bills are sometimes called "acceptances."

Of course, when a bill is transferred by endorsement the new holder does not pay the old its full face value (which he can only receive at a future date), but only that value, less interest for the period still to elapse before the maturity of the bill. This interest is called discount, and the bill when sold subject to discount is said to be discounted.

One of the characteristics of the medieval "law merchant" was to secure prompt payment of debts. In the bill of exchange—the most typical product of the law merchant—this feature is conspicuous. A bill has to be paid forthwith on maturity. (Where the law allows "three days' grace," that merely means that the actual maturity is three days later than appears on the face of it ; payment has to be none the less punctual.) The holder must not delay demanding payment, or his claims, in case of default, on the drawer and endorsers will expire. A special reliance is therefore placed upon the liquidity of bills.

Bills drawn against commodities are sometimes called "self-liquidating," on the ground that the commodities, when sold, will supply the means of paying them on maturity, and the use of such bills as bank assets is advocated on the ground that this process leaves no room for inflation.

The argument is fallacious. The goods financed by the bill may be sold before the date of maturity and the proceeds may be tied up in the purchase of a fresh lot of goods, or they may still be awaiting sale when the bill falls due. Nor will they necessarily sell at a price sufficient to cover the amount of the bill. Any other form of temporary advance for the purchase of goods has the same advantages and disadvantages in these respects. An advance for the purchase of investment securities may be more really self-liquidating, so long as the securities are readily marketable. And if securities may become temporarily unmarketable, so may goods.

Nor is the use of self-liquidating bills any safeguard against inflation. If the total amount of bank lending increases, whether the method of lending be by bills, loans or overdrafts, the means of payment pass into circulation, *before* the goods financed are sold. And when prices rise, the money value of the bills required to finance a given quantity of goods rises in proportion.

When a bill is used for an international transaction, being drawn in one country to be accepted and paid in another, it usually has to be discounted in the first instance *before* it is accepted. The drawer sells it to his banker in his own country, who transmits it to the country of the drawee in order that it may be accepted. Knowing his customer's affairs, the banker may be willing to give him credit for the value of the bill at once, without waiting for news of its acceptance. A bill represents a debt due from the drawee *personally*. Strictly speaking, therefore, the liability might follow him wherever he may be, and if at the maturity of the bill he happened to be hunting big game in Africa, the holder of the bill ought to come after him to demand payment. In practice, however, a bill is drawn on a bank or house of business with an office in a definite place. If a bill is drawn on a house with several branches, it is drawn on the head office or on a specified branch; it is not a liability of all the branches indifferently. And even if the place at which payment of the bill may be claimed is not determined in this way, the bill may be expressly made payable at a particular place, may be "domiciled," as it is called. It is well to remember that every foreign exchange operation is in reality the exchange of a debt in one place for a debt in another. Before a debt can be so exchanged the *place* in which it is to be paid must be determined. The monetary unit in which it is to be reckoned is settled by the place of payment, for debts will only be enforceable at that place in the currency legally recognised. So it comes about that the exchanges relate the monetary units of the places in which they are quoted. But the essential function of the exchanges is not to relate debts payable in different *currencies*, but to relate debts due in different *places*. And exchanges are quoted between different places in the same country, which use the same currency unit.

It is easy to see why the bill of exchange was so long the recognised form of remittance. When communication was slow and uncertain, the importer of goods did not know when they would arrive or when payment would be demanded ; the exporter would have to wait for at least the length of two voyages before he received payment, or even news that his consignment had arrived safely. The importer, when he ordered the goods, authorised the exporter to draw a bill upon him. The exporter could send the bill with the goods to a correspondent in the importer's country, where it could be used to pay any debts he might have there, or he could sell the bill to some one who required to make payments there. It is this selling of the bills that brought into existence a class of exchange dealers who made it their business to deal in bills. The importer could not know exactly when a consignment of goods would reach his country, and if a bill arrived with the goods, demanding immediate payment, he might be seriously embarrassed. It was more convenient not to make the bill payable immediately on presentation, but to provide an interval, and not merely a breathing-space—an interval of a month or three months or more—to allow of the goods being sold and sufficient money accumulated to meet the bill. Thus the remittance developed into a borrowing operation.

The advantages of remittance by bill are by no means a thing of the past. The bill retains its position especially as the instrument by which foreign trade is financed. International trade requires to be financed. The merchant who buys in one country and sells in another, like other merchants, holds his stock-in-trade in part with borrowed funds. But the funds may be borrowed either in the country from which he buys or in the country to which he sells, or perhaps even in some third country.

If two countries trading together financed the whole of their mutual trade with bills of exchange, drawn by exporters on importers, the natural course would be for each to finance its own imports. The bills would be drawn upon and accepted in the importing country, and it would be much the simplest course for them to be discounted in the country in which they have been accepted and will ultimately be paid. In the interval between the drawing of the bill and its acceptance, while it is in transit to the importing country, the exporter's bank would have advanced the money, but as soon as the bill arrives, it is accepted and discounted and for a period (possibly of several months) which elapses before the maturity of the bill the money is provided by the banks of the importing country. Discounting is lending; the holder of a bill, for the time being, is a lender.

In actual practice, different countries vary greatly in the extent to which they finance their foreign trade. One may finance practically the whole of its own foreign trade, and some even of the trade between other countries in which it has otherwise no interest whatever. This is the position of England now, as it was of Holland in the seventeenth and eighteenth centuries, and of Venice still earlier. Another may finance practically none even of its own foreign trade.

It must be remembered that very commonly creditors do not draw bills directly on their debtors, but on banks or other financial houses with whom the debtors have made the necessary arrangements. A trader who exports goods to a country whose credit institutions are but little developed may decline to be paid with a bill on any of the local banks, and the importer may find it desirable to arrange with a foreign bank of world-wide reputation for a credit on which a bill can be drawn. In the previous chapters we have not considered the *quality* of credit; we have, in fact, tacitly assumed that banks are always solvent and bank credits always good. The justification for so considerable an omission is that the theory of credit cannot be adequately understood except by an analysis which distinguishes the effects which do from those which do not depend upon the quality of credit.

In the finance of international trade the quality of credit is very important. Traders prefer bills drawn on institutions which are not merely of sound but of unquestionable credit. Bills on obscure bankers can only be discounted, if at all, on less favourable terms. Consequently, in a country financially weak, importers may pay, as exporters are paid, with bills upon a foreign centre. An importer who takes this course will receive payment for the goods, when sold, in his own country, while the bill will fall due in the foreign centre. As part of his arrangement with the foreign banker or financier who accepts the bill, he must undertake to remit the funds necessary to enable the latter to pay the bill when it matures. He will probably have to make this remittance through an exchange dealer, who will undertake to provide the requisite sum in the foreign centre in exchange for the equivalent at the market rate of exchange. The exporter, who draws the bill and receives payment in that form, being a merchant, who wants to hold not bills but merchandise, will send it to the foreign centre to be accepted and discounted. It may very commonly happen that the foreign centre is in the exporter's own country; if it is not, it is sure to be one of the great financial centres of the world, for otherwise it would not have been selected in preference to both the exporter's and the importer's countries. In any case, therefore, it will be convenient for the exporter to receive a credit there. It follows that bills which are accepted at a financial centre tend to be also discounted there. Both credits, which form the banker's liabilities, and bills, which are his most suitable assets, tend to collect, therefore, at such a centre. And the consequent development of banking adds to the financial strength by which it must in any case have been distinguished.

Ordinary banks both accept bills and discount them. But in London, where financial specialisation prevails, there are also institutions which discharge one of these functions to the exclusion of the other. Discount houses discount bills, supplementing their own capital with deposits, or money borrowed at call for the purpose. Accepting houses authorise the drawing of bills upon themselves, upon condition that the necessary funds are provided to meet the bills when due. Their liabilities are therefore the bills and their assets are their clients' obligations to provide funds. The credit of the accepting house is attached to the bill to enable the drawer to get it discounted on more favourable terms, and the merchant to whom the credit is granted pays a commission as the price of what amounts to little more than a guarantee. It is not quite accurate, however, to say that the accepting house supplies only a *mere* guarantee. A claim cannot be made against the guarantor of a debt unless the debtor has failed to pay. But the acceptor is himself the debtor on the bill. The drawer and endorsers are legally in the position of guarantors. The acceptor must pay up on the spot when the bill is presented after maturity, whether his client provides the stipulated funds or not. It is a consequence, too, of the acceptor being the principal debtor that the bill is payable at the place where he carries on business. If he were a mere guarantor this would not necessarily be so.

The business of a financial centre depends very much on the exchange dealers who have establishments there, and who effect the actual remittances between it and other parts of the world. These exchange dealers are, of course, for the most part banks. They not only remit by buying and selling cheques and telegraphic transfers, but they buy and sell bills, and they grant credits in all the countries in which they do business. Their assets are largely composed of bills, and these bills are sure to be predominantly drawn on the financial centre. Consequently the local distribution of their assets and that of their liabilities do not correspond. At the financial centre their assets exceed their liabilities. At other places their liabilities exceed their assets. If at any time a large portion of their liabilities at one of these latter places has to be met, owing, for example, to a sudden money stringency, it may be necessary to make a part of the central assets available to meet the outlying liabilities. Bills can be sold for credits at the financial centre, but the credits cannot be remitted without loss through the exchange market because it is the exchange market itself that is in difficulties. The credits must be turned into gold and the gold sent to the threatened spot. Thus one of the essential conditions of the business of a financial centre is the unrestricted transformation of credits into gold and the free export of the gold.

A condition which specially favours London as an international centre is the existence there of a free and effective discount market, or market in bills. The characteristic of the London discount market is that its dealings in bills are divested of the personal relation between banker and customer, which is usually essential to such transactions. Elsewhere people who draw bills sell them to their bankers, and the bankers ordinarily keep them till maturity. If they have occasion to raise cash upon them before maturity, they get the bills rediscounted with the Central Bank, or possibly with other banks with whom they are accustomed to deal.

In London, on the other hand, the discount houses stand ready to buy *any* good bill at a price. They make a free and competitive market in which the weight to be attached to the credit of every name on a bill is narrowly assessed, and the rate of discount is fractionally adjusted to the state of the market from hour to hour. There is a steady flow of bills into the market, very largely bills bought by the exchange banks from their customers. A part of the bills are held by the discount houses, and a part are resold to banks which desire to maintain or to increase their holdings of bills.

It is a peculiarity of the English banking system that the clearing banks do not either sell bills or borrow. They have devolved on the discount houses the function of procuring money from the Central Bank by rediscounting. The clearing banks hold a part of their resources in the form of money lent at call or short notice to discount houses, and whenever they need more cash they call up what they need from these loans. The discount houses do not hold any large amount of cash balances. They are perpetually turning over large sums; they receive money lent at call and the proceeds of maturing bills, and they pay what is due for bills purchased and for loans called up. They can, to some extent, regulate demand and supply by raising and lowering the rate of discount and the rate of interest they offer for loans, but obviously variations in rates cannot ensure an immediate equilibrium. Therefore the discount houses rely on borrowing from the Bank of England whenever their payments outrun their receipts (see below, pp. 227-8).

The Bank of England never refuses to lend to the discount houses, the loan usually taking the form either of the rediscount of bills or of an advance (often for a week) on the security of bills. The bills which the Bank will take for this purpose form a well-defined class, thoroughly understood by the discount houses.

Reliance on this ultimate recourse to the Bank of England enables the discount houses to maintain a perfectly free and open market in which bills can always be sold at a price. The market only breaks down when, as in August, 1914, there is wholesale distrust of the solvency of the parties to the bills.

A financial centre is likely to be very cosmopolitan. The exchange banks which possess large holdings of bills drawn upon it may derive their capital from many countries. The essential characteristic is that even though the bills may be drawn by foreigners on foreigners, yet they are drawn on the centre and payable in its currency. As traders in the more circumscribed area of a single country pay one another in cheques which are passed through a single clearing-house, so international traders pay one another in bills which are drawn on a single financial centre. London is often called the clearing-house of the world's trade.

CHAPTER IX.

A CONTRACTION OF CREDIT.

In currency systems like those which formed the subject of Chapters VI. and VII., where the legal tender circulation includes paper money convertible into gold, the regulation of credit is based upon the gold reserve, the free margin of gold which can be drawn upon either for export or for internal circulation without violating the law. This gold reserve may be threatened either by an internal or by an external drain. An internal drain of gold into circulation is usually gradual, and can only be modified gradually through the regulation of credit. An external drain is subject to much more rapid changes, and is therefore more susceptible of management. The outward sign of the conditions that cause an export of gold is an unfavourable exchange, and the problem of managing the currency constantly presents itself as the problem of inducing a favourable tendency in the foreign exchanges.

The weapon for the defence of the gold reserve is a contraction of credit. By its means the consumers' outlay is diminished, and, the country becoming a less favourable market to sell in, foreign trade commodities tend to be repelled from it; that is to say, exports are stimulated and imports checked. But in using this weapon, the *rapidity* with which it can do its work is a matter of the first importance, and in the present chapter we shall examine the different conditions which affect the sensitiveness of a credit system to a contraction of credit. The contraction may be assumed to be effected primarily by a rise in the rate of interest on short term borrowings (including, of course, the rate of discount on bills), but to be reinforced by such methods as are open to bankers to discourage their customers from borrowing.

We have already shown that a high rate of interest acts in the first instance on the wholesale dealer or merchant, who restricts his orders to the manufacturer or producer. How long will this restriction of orders take to affect the consumers' income and the consumers' outlay? Clearly the answer must depend partly on the state of business at the time at which the contraction of credit begins. If there is an accumulation of unexecuted orders, containing the menace of a great latent demand for credit, the arrears of orders must be worked through before the increase in the rate of interest can have any appreciable effect. But even if there be no such accumulation of commitments, the contraction of credit can only work gradually; there will still be an interval before all outstanding orders are completed. If every manufacturer accepted a new order only just before completing the last, the different orders outstanding at any specified moment would be in all possible stages of manufacture, some being just about to be begun, some in the early, middle, or late stages, some just on the point of completion. When the rate of interest is raised, even if the merchants give smaller orders, the effect on the demand for loans from the bankers will not be completely felt till the existing orders have been worked through, and if there is an accumulation of arrears it may not be felt at all till these arrears are overtaken. The borrowings of the manufacturers depend upon the volume of work upon which they are engaged, and the borrowings of the merchants depend upon the goods of which they have to accept delivery. So long as the manufacturers' output is undiminished, the creation of credit will continue unabated; it is only when the manufacturers, having completed the old contracts, have to curtail their output in proportion to the diminished orders given by the merchants, that the contraction of credit really begins to take effect.

The full diminution in the demand for loans will only be accomplished when the merchants are taking delivery of the diminished orders, and both their borrowings and those of the manufacturers are on the lower level. Thus even after the completion of all arrears of orders, an interval must still elapse, equal approximately to the period required for the fulfilment of an order, before the contraction of credit is completely effective. The period required "for the fulfilment of an order" is vague enough; it depends not only on the size of the order and the nature of the manufacture, but also on the capacity of the manufacturer's plant. The time taken in the manufacture of a single article sets a lower limit, and for some trades, e.g. shipbuilding, this may be many months.

The construction of fixed capital is in most cases a lengthy process, and large capital commitments are therefore specially apt to overstrain credit when the turning-point from expansion to contraction arrives. These capital commitments may be financed either by advances to the contractors engaged upon them or by loans to underwriters and other holders of securities in the investment market. In either case, the advances are really in anticipation of the savings by which the capital expenditure has ultimately to be paid for. So long as the expenditure is proceeding, the necessary credits must be forthcoming, even though financial conditions have become unfavourable and the underwriters would be glad to be quit of their obligations if they could.

The conditions governing agricultural production are somewhat different from those to which industry is subject. A contraction of credit will make both dealers and farmers less willing to hold produce with borrowed money. But their unwillingness does not easily react upon production. The farmer does not produce like the manufacturer in response to an order from a dealer. There is so great an element of chance in agricultural production that nice calculations of the quantities to be produced are impossible. The farmer usually sets out to make a productive use of the whole of his land. The kind of produce to be obtained from each parcel of land is decided primarily by physical considerations, and by the permanent factors of the market. Adaptation to short-period changes in demand, though not entirely absent, takes a secondary place, and where it does occur, is usually confined to the substitution of one kind of crop for another. In any case (except where live stock is in question), the opportunity only occurs at the time of sowing, and only then if the change in demand can be foreseen as affecting the market at the time of harvest.

On the whole, a *general* restriction of production in agriculture in response to a general decline in demand is not a contingency to be taken into account. The effect of a credit contraction on production is rather to be seen in industry.

A contraction of credit impels the merchant to reduce his indebtedness not only by restricting orders for new supplies, but by pressing on the sales of his existing stocks, and perhaps also by leaving in the business profits which might otherwise be distributed. Now so far as the home market is concerned, the possibility of selling goods is limited to the amount of the consumers' outlay; the merchants' opportunities of selling off their stocks are limited to a region in which the people who deal with one another are all financed by the same set of banks. The moment foreign trade enters into the problem, all is changed. The country which finds the exchanges turning against it, and its gold reserve threatened, merely has to find purchasers who are financed by another set of banks, in order to gain a vent for its surplus goods and to acquire the means of extinguishing its redundant credit.

In this respect there is a wide difference between a country which is a great financial centre and one which is not. The traders of any country may be broadly divided into producers and dealers. The producers may be divided into those who produce for export and those who produce for the home trade. The dealers may be divided into those who buy and sell at home, those who buy abroad and sell at home, and those who buy at home and sell abroad, or, more shortly, home dealers, importers and exporters.[1] The home dealers may be assumed to be financed at home. The importers and exporters may be financed either at home or abroad. A country which is a great financial centre will itself finance both its exporters and its importers. One which is not may not finance either to any appreciable extent.

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[1] The home dealers are not to be identified with dealers in home trade products. They may deal in foreign trade products which are produced and consumed at home.

Consider the case of a country of the latter kind. Suppose that it contracts credit. The home dealers will respond by curtailing orders and pressing on sales. The producers for the home trade will be adversely affected ; and will eventually have to restrict output. The export merchants will be unaffected by the credit contraction, and the producers for export will experience no diminution of orders. The import merchants will have no inducement to increase their sales. In short, as the effect of high interest rates on producers is small compared with the effect on dealers, and as a great part of the dealers in the markets of such a country are outside the influence of its credit system, the effectiveness of the credit contraction is diminished.

The restriction of orders affects, in the first instance, only the producers for the home demand. They will try to compete in the export and import markets, and in so far as they succeed they will communicate the pressure to the import and export dealers, and will compete with the producers for export. But in so far as they succeed they will at the same time reduce the pressure on themselves. Thus the attachment of a portion of the mercantile community to a foreign banking system weakens the effect of the contraction of credit upon production.

The contraction of credit works not only by curtailing orders to the producers but by impelling merchants to increase their sales. The capacity of the home market being limited, the home dealers will tend to encroach on the export and import trades, either by selling to the export and import dealers or by competing with the former in the foreign markets and with the latter in the home market. Be the process direct or indirect, what happens is in effect that the home dealers get rid of their surplus stocks in exchange for foreign credits. This relieves the foreign exchange situation, and it is clear that the extent of the relief is proportional to the quantity of the surplus stocks. Other things being equal, the surplus stocks will be proportional to the business of the dealers concerned. Here again we see how the smallness of the mercantile element included in the country's credit system impairs the effectiveness of the credit contraction.

The case of the country which finances its own foreign trade presents a striking contrast. In such a country the producers have little or no direct contact with any merchants who are not subjected to the pressure of the credit contraction. At the same time the import dealers and export dealers, as well as the home dealers, are all interested in selling surplus stocks abroad. In proportion as there are more merchants, the surplus stocks and the foreign credits obtained in exchange for them are greater.

And the mechanism of credit reinforces the contrast. In the case of a country which is a great financial centre, both exports and imports will be paid for by bills drawn upon its own banks or accepting houses. So far as imports are concerned, the relation between the exchange market and the transactions to be financed is simple. When the goods are consigned, a bill is drawn upon a credit arranged by the importer in his own country, and is discounted by the exporter in his country. The discounting of the bill, in a different currency from that in which it is ultimately payable, is an exchange operation, and directly affects the exchange market. A diminution of imports immediately relieves the demand for foreign currencies.

The case of exports is more complicated. The purchaser arranges a credit in the *exporter's* country, and authorises the exporter to draw upon it. The exporter discounts the bill in the *same* country in which it is ultimately payable, and no exchange operation takes place till the importer has to remit to the acceptor the means of meeting the bill.

When the country on which both classes of bills are drawn contracts credit, and its exports are stimulated and its imports checked, there is a great outstanding mass of indebtedness due to it from the countries to which it has been exporting in the immediate past. Day by day, as the bills with which these exports have been financed fall due, sums have to be remitted to meet them from the countries to which the exports were sent. At the same time the export dealers, who have been financed in this manner, proceed under the influence of the high rate of discount to reduce their indebtedness by reducing their stocks. They abstain from buying, and consequently do not have to discount bills; they hasten sales for cash in foreign countries, and so acquire additional credits abroad. Meanwhile the import dealers, being equally subject to the pressure of the money market, likewise abstain from buying, and fewer bills are presented for discount abroad. All these tendencies combine to make the exchanges react at once to the contraction of credit.

A country, on the other hand, whose foreign trade is all or nearly all financed abroad has, as we saw, less power of stimulating exports and repelling imports by means of a credit contraction. And even such power as it has of doing this reacts less easily and immediately on the exchanges. The increase of exports indeed is immediately effective, being accompanied with a proportionate increase of bills on foreign centres requiring to be discounted in the exchange market before they are sent abroad. But the decrease of imports only decreases the bills which will mature in one, two, or three months; in the meanwhile it will do nothing to relieve the exchange market, which has to provide remittances to meet at maturity the bills drawn one, two, or three months before.

The greater susceptibility of the country which is a great financial centre to a contraction of credit is largely the result of the greater proportion of the short-term indebtedness due from merchants as compared with that due from manufacturers, manufacturers being less sensitive than merchants to the rate of interest. Both sides of the merchants' response are important—the restriction of their purchases and the increase of their sales. The increase of sales, by heaping up credits abroad, gives immediate relief to the exchanges, but this is not sufficient. If the pressure on credit were relaxed too soon, while the consumers' outlay is still excessive, the exchanges would at once relapse. The contraction of the consumers' outlay is proportioned to the restraint on production, and the restraint on production is governed by the restriction of the merchants' purchases. If the home dealers alone are subject to the contraction of credit, the restraint on production is only partial; if home dealers and export dealers are both subject to it, the restraint is complete.

This gradual diminution of the consumers' outlay is of the essence of currency control. If the consumers' outlay has become excessive, this is due to a too profuse creation of credit; too profuse, that is, in proportion to the conditions and prospects of credit abroad. In the first instance, a credit expansion stimulates production; it is when production ceases to respond easily to the stimulus that a rise of prices partly virtual and partly actual begins. When the whole productive machine is working at a high level of money values, and markets have become unduly attractive to foreign trade commodities, imports increase, exports decrease, and a balance of indebtedness has to be paid. If matters are allowed to drift, the balance is paid in gold till the gold is exhausted. A contraction of credit, by impelling merchants to increase their sales and to diminish their purchases, helps to effect an immediate redress of the adverse balance of indebtedness and to preserve the stock of gold from further depletion. But a radical cure cannot be effected till the cause of the disorder has been removed, that is to say, till the excessive consumers' outlay has been reduced.

In one respect the power of the great financial centre is an actual disadvantage. When it inflicts a contraction of credit on the international merchants, it not only makes the restraint on its own producers more complete, but it extends the restraint in some degree to producers in other countries. The contraction of credit depresses world markets; producers everywhere find that demand flags and competing sales are hastened. World prices fall, or, in other words, foreign currencies appreciate. We have assumed that the purpose of the contraction of credit is to correct a depreciation of the currency relative to those of other countries, and the appreciation of foreign currencies conflicts with this aim. On the other hand, the foreign countries have been receiving gold, and do not desire their currencies to appreciate. They are likely to use their power of regulating credit, such as it is, to promote an expansion.

When it is a question not of redressing a depreciation of the currency relative to those of other countries, but of starting a general contraction of credit in all gold standard countries together, the lead devolves naturally on one which is a great financial centre. Of its own motion it can do most of what is required, not only for itself, but for its neighbours too.

This leadership in the regulation of credit has long been the prerogative of London. In the days of bimetallism up to 1871, Paris shared the responsibility. The impairment of this position was probably attributable not so much to a disastrous war as to the abandonment of bimetallism, leaving the Bank of France free to pay its notes in five-franc token coins, instead of gold. The German Reichsbank also was not prepared in practice to allow gold to be freely withdrawn for export.

Paris continued to play the part of an international centre, and so did other Continental centres, such as Amsterdam, Hamburg, Frankfort and Vienna. But London outdistanced all. The bill on London was the means of financing a great part of the international trade of the world. Credit everywhere followed the English Bank rate.

The effect of a credit contraction in one centre on trade in another is closely bound up with their using a common metallic standard. If one or both had inconvertible paper money, contracting credit and falling prices in one might exist concurrently with expanding credit and rising prices in the other. The rate of exchange would move against the latter and would maintain equilibrium in the balance of payments.

Nevertheless, there is some tendency for the contagion of a credit movement to be transmitted in spite of the use of mutually independent currencies. In the first place, when merchants engaged in international trade are stimulated to sell and deterred from buying by a credit contraction, their operations will be directed in the first instance to markets with paper currencies as well as to those with gold currencies. That will be so until the paper currencies in the former markets begin to depreciate. But the depreciation will not *necessarily* occur at all. For the unfavourable state of international markets may provoke a credit contraction in the countries with paper currencies.

And when the original credit contraction has passed beyond the early stage at which only the merchants are affected, and has diminished the consumers' outlay in the gold-using countries, the paper-using countries, finding world markets unfavourable at existing prices and rates of exchange, may adjust themselves by quoting lower prices instead of less favourable rates of exchange. Credit control may be used either to accentuate this tendency or to correct it, but if the credit system of a paper-using country is left entirely to itself, the outcome will probably be some sympathetic credit contraction combined with some adverse movement of the foreign exchanges.

It is equally true that a credit expansion among the gold-using countries will tend to produce a sympathetic expansion among the paper-using countries.

Up to this point we have confined our attention to the effect of a contraction of credit on the commodity markets. The investment market is likewise affected. At a financial centre the investment market will have an international character. Its business will include dealing in international securities and the dealers will hold a supply of such securities. The dealers will buy and sell securities on behalf of foreign customers, and the foreign customers are likely at any moment to be, on balance, indebted to the dealers, partly for securities bought and not yet delivered, and partly for securities held speculatively.

A contraction of credit makes the holding of securities with borrowed money less attractive. It *may* be possible to make a profit by borrowing at 6 per cent. to hold a security which yields 5, because a very slight capital appreciation would wipe out many weeks' interest. But if there is no expectation of capital appreciation, the arrangement has nothing whatever to recommend it.

If foreign customers of the investment market start taking up their securities and paying off their indebtedness, there is a directly favourable effect on the exchange. If they sell the securities to pay off the indebtedness, the case is different, for the immediate effect is to pass on the burden of carrying the securities to the dealers who buy. But the pressure of the credit contraction on the dealers will impel them to offer securities for sale at more attractive prices, and as the market holds international securities, a proportion of the buyers will be foreign.

At the same time, there will be a damping down of new capital issues. At an international centre this will mean a diminished export of capital, which will have an immediately favourable effect on the foreign exchanges.

The movements of merchandise and securities under the influence of a contraction of credit depend on the action of borrowers. There remains to consider the effect of a rise in the rate of interest on the *lenders*. Suppose for a moment that the rate of interest rises in a country which has not the same monetary standard as its neighbours, so that there are no gold points to limit the movements of the foreign exchanges. If the rate of discount on three months' bills were 1 per cent. higher there than elsewhere, the possessor of a credit in a foreign country would be tempted to remit thither in order to lend at this more advantageous rate. But as the profit on the transaction would be only 1 per cent. for three months, that is to say, $\frac{1}{4}$ per cent., this tendency to remit could be counteracted by the expectation of a loss on exchange of no more than $\frac{1}{4}$ per cent. when the money is repaid. The gain from a difference of 1 per cent. on short-term debts being so insignificant in comparison with the exchange risk, it is obvious that there might be a very large discrepancy between the rates in countries without a common standard. The direct effect on the exchanges, through the attraction of remittances from lenders, would be slight compared to the effects of a high rate of interest on those who borrow to hold goods and securities.

But where the rise in interest occurs in a country which is one of a gold-using group, the case is more complicated If the purpose is to check an inflation which is occasioning an export of gold, the exchanges are at the export gold point

The inducement to a lender to remit from a foreign country will not be threatened by a loss on exchange unless the exchange reacts away from the export gold point, and apparently, therefore, even though the additional rate of interest be the smallest that offers any profit worth considering, it will not be counteracted unless there be a stream of remittances from abroad sufficient to stop the outflow of gold altogether. So long as the exchange remains at the export point the foreign lender gains the extra interest, and he cannot lose by exchange, when the loan matures and he wants to remit it back to his own country, because the exchange cannot go beyond the export point so long as the gold standard is effective.

In practice, however, there is room for a very considerable difference between the rates of interest in different markets; at any rate, for a short time. A difference of, say, 1 per cent. for three months, or ¼ per cent. in all, may not be enough to remunerate the extra trouble, and cover the expenses of commission perhaps, involved in the double remittance. And the art of lending is largely the art of finding suitable borrowers. A financier cannot at short notice find eligible borrowers in a country which he does not know, and there may be obstacles to enforcing his rights in the courts of a foreign country, if this should be necessary, at any rate without excessive legal expenses. This speculative lending would probably be confined therefore to those financial houses, such as the exchange banks, which already have a footing in the country concerned as well as in their own country.

We are supposing that the rate of interest is raised to check inflation. If there is an inflation of credit at one of the places at which an exchange bank carries on business, there will be, in the first instance, a pressure to remit *from* that place. Its cash holdings there, and its demand liabilities elsewhere will grow. The rates of exchange will be put up against the country of the inflation, and if when the export specie point is reached the remittances do not cease, the cash will begin to be sent direct in gold. If the rate of interest is then raised, the exchange bank is well situated to take advantage of it by lending the superfluous cash, which would otherwise have to be sent abroad. But it is easy to see that this may not be a very alluring source of profit. The tide of remittances flowing one way modifies the balance sheet of the exchange bank by substituting assets in the country *from* which the remittances are made for assets in that *to* which they are made. So long as the new assets in the former are cash, and the cash is either gold or paper convertible into gold, the balance can be redressed by sending the gold from one country to the other. But as soon as the bank lends the gold, a different kind of asset is substituted for the gold, a loan localised in the country in which it is made.

There are obvious limits to the extent of this substitution. As fast as the bank gains assets in one country, it loses them in the other. In the latter it has to meet adverse balances at the clearing, and must realise a sufficient amount of its resources for the purpose. That means that it must sell or pledge bills or investments, or else call in advances ; it must either reduce its liquid assets or inflict inconvenience, hardship or even ruin upon customers whose credit is not marketable.

A part of its liabilities in the one country will be covered by assets in the other. Provided these assets can be realised at short notice, and the proceeds transmitted to the other country without loss, no harm is done. The former condition requires a free and sensitive discount market. For liquidity can be much better secured by investing in a bill which can be sold, than by lending money at short notice and relying upon the right to call it in. Experience has repeatedly shown that money lent at call cannot be relied on in an emergency, and it is most liquid when, as in London, the market in call money is linked up with the market in bills.

The other condition of safe lending in a foreign centre is that, if the sums lent have to be realised, they can be remitted home without loss. That means that in order to attract lenders there must be confidence not only in the borrowers but in the currency in which the loans are repayable If the inflation which we have assumed to exist gets out of hand and leads to a suspension of gold payments, not only will the profit anticipated by the foreign lender from the extra interest be wiped out, but there may be a heavy deficiency in the value of the assets as compared with the demand liabilities in gold currency against which they are held.

The effectiveness of a high rate of interest in attracting short loans from abroad thus depends on confidence in the solvency of borrowers, confidence in the currency, and confidence in the continuance of a free and effective market in bills. These are the very conditions that make a great financial centre. Here, therefore, is yet another advantage which belongs to the financially strong country in the regulation of the foreign exchanges.

But here, again, it is necessary to point out that equilibrium cannot be definitively restored except by a suitable contraction in the consumers' outlay. When the rate of discount is put up, the support given to the exchange by the attraction of money from abroad for short-term investment is no more than temporary, it only lasts while the money is actually coming, that is, while the total amount of foreign money invested in the country is *increasing*. The moment it stops increasing, the favourable effect on the exchanges ceases ; when it begins to decrease, the effect on the exchanges becomes unfavourable. Thus the attraction of foreign money is an essentially *transitory* expedient.

It has for the moment the same effect upon the balance of payments as the export of so much gold. But whereas the export of gold tends to reduce the supply of currency and to bring about a credit contraction, the attraction of foreign lenders has no such effect. The operations of the foreign lenders do, it is true, take the place of an equal amount of lending by the country's own banks. But there is likely to be little or no reduction in banking assets on the whole, so long as the cash position of the banks is unaffected ; borrowing, in fact, will be encouraged, and the total volume of short-term lending will be increased.

The Central Bank can counteract this process by reducing its holdings of securities and making Bank rate effective as if gold had been withdrawn. But the need for judging when and how far to do so complicates the bank's task.

A more serious complication is that the attraction of lenders from foreign countries tends to raise discount rates in those countries; they are infected with the credit contraction.

Rates would not rise *equally* in other countries. If foreign lenders are to be attracted at all, there must be some difference. Rates of discount or short-term interest in different centres are linked together by the gold standard, but are free to vary within limits, " lending points," as it were, not unlike the gold points of the foreign exchanges. If an extra 1 per cent. on a three-months' bill is just enough to attract an American lender to the English market, then discount rates in London cannot ordinarily be more than 1 per cent. above those in New York (so long as the exchange is close to the point at which gold can be exported from England to America).[1]

These limits, however, depending as they do on many uncertain factors, are by no means so definite or so constant as the gold points in the foreign exchanges. When all the readily-disposable balances have been absorbed, a substantially larger difference in interest is required to attract any more. And a slight distrust of the currency may make the limits inoperative. After the crisis of 1866 a 10 per cent. Bank rate failed for some time to attract gold to London (see below, pp. 178-9).

Under the conditions that ruled between 1871 and 1914 differences in short-term interest rates between different financial centres were rarely, if ever, such as to provoke very large migrations of balances. When the English Bank rate led the way, all the great gold standard countries kept pace together, and those divergences which would necessitate wide differences in short-term interest rates between one centre and another did not occur.

The English Bank rate, nevertheless, was more sensitive than the rates in other centres. It would go up or down according to the state of the money market and the foreign exchanges, and foreign rates would only respond when the differences threatened to become excessive. Critics often pointed this out, and suggested that there was something wrong with the English credit system, because Bank rate was changed twice as often in London as in Paris or Berlin. They did not realise that the Bank of France and the Reichsbank had practically surrendered the control of credit in Europe to the Bank of England.

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[1] A country with a *favourable* exchange may find it much more difficult to attract foreign lenders, because then there is an exchange risk.

When the gold standard was re-established in England in 1925, it became necessary to correct a depreciation in the pound relative to the dollar and other gold currencies. The gap to be bridged was greater than was experienced under pre-war conditions. The traditional instrument of a high Bank rate was used to correct the discrepancy, but its effectiveness was seriously impaired, because it reacted on world credit conditions and drove up the purchasing power of the dollar as well as that of the pound. A very severe measure of deflation only accomplished slow progress towards equilibrium. At the same time the situation was obscured by the movement of floating balances from New York to London and back.

A very persistent misconception prevails as to the use of the discount rate to defend gold reserves. It is often supposed that the virtue of this method lies in the attraction of balances from abroad for temporary investment. In reality this is no more than a stop-gap remedy, and to cope with anything more serious than a casual and temporary disturbance of equilibrium, it is necessary to rely on the powers of a credit contraction to curtail the consumers' outlay and lower the price level. The misconception was particularly unfortunate in its consequences during the war and the subsequent depreciation of sterling, because it was clear then that the exchange fluctuations nullified the power of high short-term interest rates to attract balances, and the inference was hastily drawn that a high Bank rate could do nothing. The fallacy was lucidly exposed by the Cunliffe Committee (paragraph 5 of Interim Report of July, 1918), but has not been eradicated, despite the high authority of that body.

But at any rate the power of attracting balances for temporary investment does diminish the extent of immediate demands on the gold reserve. And as this power is so much more extensive in a great financial centre, a country which is not in that position is compelled to hold a relatively large gold reserve, or be exposed to the danger of finding its reserve exhausted and its currency depreciated in an emergency.

To escape from this dilemma, to avoid the insecurity of a small reserve on the one hand and the expense of a large one on the other, there has been devised the gold exchange standard, which has been referred to above (Chapter VI., p. 105).

Even if a country has no position at all as a financial centre, if no one draws bills on it even to finance its own import trade, there is nothing to prevent it investing in bills drawn on other countries. In time of stress, when the exchanges are adverse, people come to the central bank of the country to withdraw gold for export. This they do solely in order to obtain credits in exchange for the gold in foreign countries, and it would suit them just as well if the central bank could give them credits in those foreign countries instead. The central bank, therefore, makes a regular practice of applying a part of its resources to the purchase of bills payable in one or more foreign centres, selected as being those where traders are most likely to want credits.[1] The bills must, of course, be bought after acceptance, and must be presented for payment, if still held, at maturity, and consequently the central bank must have some agency or representative in the centre on which they are drawn. While they are held they may be either left in this centre or taken home by the central bank. When the exchanges become adverse the central bank can come into the foreign exchange market and either offer the actual foreign bills for sale, or itself draw bills on the foreign centre in favour of traders who want to remit thither. The essence of the arrangement is that the central bank should have the command of assets at the foreign centre. Bills accepted at that centre are a convenient form for such assets to take, but money lent at call or on deposit or invested in easily realisable securities would serve as well. The possession of such assets in any form enables the central bank to redress the balance in the exchange market by offering for sale bills drawn upon them.

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[1] See J. M. Keynes, *Indian Currency and Finance*, chap. ii.

This system has the double advantage that it acts on the exchanges even more directly and quickly than the export of gold, and that the bills or other foreign assets, unlike gold, yield interest. The accumulation of a vast reserve of gold is sheer waste, except for the financial stability which it gives, and if that stability can be equally well gained without the sacrifice involved in sterilising so great a part of the country's wealth, there is no reason for incurring this waste. Foreign bills or balances abroad are maintained, just like gold reserves, to secure the convertibility and the parity of a paper currency; when the exchanges become adverse, bills on foreign centres are sold and are paid for with legal tender paper, which is thus withdrawn from circulation. Obviously the whole system depends on the paper being definitely withdrawn; if it is lent out again, nothing will have been achieved towards restoring the exchanges, the central bank will merely have substituted assets at home for assets abroad. If the paper when once withdrawn is withheld from circulation, the same effect ensues as from an export of gold; the purchasing power in circulation is diminished by that amount, but, in order that a proportional reduction may be made in the stock of credit, the rate of interest must be kept up.

It does not much matter in what country the foreign assets are held, provided it be a sufficiently important financial centre for bills upon it to be always in considerable demand. If the bills can be sold at all, the necessary withdrawal of legal tender paper can be carried out, and, even if the chief demand is for exchange on a different financial centre, the sale of the bills will transfer the strain of that demand to the centre on which they are drawn.

If the banks of every country held among their assets a substantial amount of bills or other loans payable at maturity in other countries, all could regulate their foreign exchanges without any transmission of actual gold. In practice, countries are not willing to be unduly dependent on their neighbours in so important a matter as the regulation of credit or currency, if only because a war might at any time cut them off from one or other of the financial centres in which their foreign assets are situated. But in spite of this risk Russia, Austria-Hungary, Japan, Argentina, Greece, the three Scandinavian countries, all made use before the war of this convenient substitute for a gold reserve, and colonial dependencies, being free from the war risk, have in some cases based their whole currency system on assets held for the purpose in their mother countries. The British colonies in East and West Africa, the Straits Settlements, the Philippines, the Dutch East Indies, are instances. In these cases, and in India, it is not merely a note issue which is so regulated, but a silver coinage system. If there were a free coinage of silver, the unit of value would, of course, be silver, but silver is only coined at the discretion of the Government, and by limiting the amount coined the value of the standard coin is kept up (in accordance with the quantity theory) to something materially above the market value of the silver bullion of which it is composed. An over-valued silver coin or " token " of this kind has been called a " note printed on silver," and *provided* the fluctuations in the value of silver do not bring its intrinsic value up to its nominal value, it behaves in exactly the same way as a legal tender paper currency.

The sensitiveness of a credit system to changes in the Bank rate depends very much upon the character of the country's business, and on the proportion of it which is financed on credit. The class most dependent on credit and most sensitive to credit movements being the merchants, a predominantly commercial country will be correspondingly sensitive, and its credit system will be the more easily controlled. Manufacturers on a large scale, though less sensitive and possessing less power of economic initiative than the merchants, are nevertheless large temporary borrowers. The manufacturer, being a purchaser of raw material and a seller of his finished product, has some of the characteristics of a merchant. He will tend to let his stocks of raw material run down at a time when he cannot borrow on favourable terms, though his desire to keep his works going will lead him to buy under conditions when a merchant would not. Sometimes, actuated by the same motive, he will manufacture for stock, when he has no orders on hand, and when he has no immediate hope of selling. In order to carry greater stocks of unsold goods than usual, he must borrow, and the terms on which he can borrow will affect his action in some degree, though not to the same extent as that of a merchant in similar circumstances.

Retail traders differ in some respects from wholesale merchants. It is the business of the wholesale merchant to be vigilant and adaptable. The sphere of the retailer is more restricted, and less initiative is demanded of him. Often the custom of his trade prescribes narrowly the prices he may quote. He must charge a fixed percentage above the price he paid for the goods he sells, and when the wholesale price changes, he must go on selling his existing stocks at the old price, which no longer corresponds to their replacement value. In so far as the retailer is prevented from adapting his prices to the market, he is precluded from defending himself against variations in demand. He must go on selling cheap in a rising market, and watch his stock-in-trade melting away, till he begins to draw upon the more recently acquired consignments.

When the consumers' outlay is increased, the less the rise of prices, the greater will be the increase in the quantity of goods purchased. The more rapid, therefore, will be the depletion of stocks, and the greater will be the volume of production required to make them good. The result will be to exaggerate the effects of a credit expansion.

Likewise any obstruction to the reduction of retail prices will exaggerate the effects of a contraction in the consumers' outlay. So long as retailers keep up their prices, sales will be retarded, fewer orders will be given, and production will be curtailed. When a severe contraction of credit takes place, retailers are sometimes particularly reluctant to reduce prices, lest an open acknowledgment of the depreciation of their stock-in-trade lead their bankers to call in loans which are no longer adequately secured. Yet in reality they lose more from the restricted sales than they gain by the maintenance of prices, and so ruinous is the check to business that the custom of the trade is relaxed to the extent of allowing from time to time clearance sales of old stock "at a reduction."

As has already been pointed out, agricultural production is less sensitive than industry to credit, even where the farmers are in the habit of borrowing from their bankers. But the small peasant is in a different position. His unaided credit does not enable him to borrow on tolerable terms, and his business is too small to support a banking account. He sells his crops for money, whether metal or paper, and gradually draws on the money in the interval before his next harvest. A nation of peasants, like India or Egypt, develops comparatively little banking business for its own needs. If even the necessary mercantile business of such a country is financed by its richer neighbours, its currency is almost completely insensitive to banking control. When foreign nations contract credit, it can do nothing to keep pace ; it must remain passive while its peasant population, finding their sales in foreign markets diminished, gradually pay away their hoards, till the shrinkage of purchasing power brings down prices to the international level.

It may seem mysterious that so slight a change as an increase in the rate of interest on temporary loans by 1 or 2 per cent. should have such far-reaching results as are, in fact, found to follow. The explanation is in part to be found in the immediate reaction on the merchants, who are the economic leaders. But the effect is very much intensified by the fact that a contraction of credit starts a fall in the prices of commodities, and a fall in prices itself has the same effect as a further rise in the rate of interest. We saw in Chapter II. how rising prices operate as an inducement to merchants to increase their stocks, and that the rate of interest, in order to lead to a diminution of stocks, must be high enough to offset this. And just as rising prices augment the merchant's profit, and lead him to accelerate his purchases, so falling prices diminish it, and lead him to accelerate his sales. In fact, once the rate of interest has begun to take effect and to depress prices, the fall of prices itself reinforces its effects. This is one more instance of a phenomenon which is constantly recurring in the theory of credit, and which is indeed at the root of the inherent instability of credit; a disturbing cause gives rise to ulterior effects which, in turn, have a tendency to stimulate the cause itself. When credit has definitely turned the corner, and a contraction has succeeded to an expansion, the downward tendency of prices is sufficient to maintain the process of contraction, even though the rate of interest is no longer, according to ordinary standards, high. Merchants who cannot see their way to sell at a remunerative price are quite reluctant enough to buy, without the added discouragement of high interest. To put the same thing from another point of view, the monetary unit is *rising* in value, and a borrower, quite apart from the charge for interest, has to repay a greater amount of purchasing power in terms of commodities than he originally received.

During an expansion of credit, prices are rising and profits are high, and the rate of interest rises in sympathy with profits. The expansion culminates and ends with a further rise in the rate of interest to the point at which it just offsets the expectation of profit, and thereupon there ensues a period of contracting credit and *low* interest. And even after the bank reserves have been everywhere restored to the normal proportion of the banks' liabilities, interest will continue low for a further period in order to induce merchants to resume the business of borrowing and buying. The history of the London money market is full of examples of this alternation of high and low interest.

The periodicity of expansions and contractions of credit has for long attracted the attention of economists. The periodicity is the natural result of the slow response of people's cash balances, or, in other words, of the cash portion of the unspent margin, to credit movements. Credit is easily induced to expand, but its expansion is not immediately accompanied by a proportionate increase in the earnings of the working classes or in their power to absorb cash. Even when earnings do show a material increase, this goes to a great extent not in increased balances but in increased expenditure. In so far as the money paid out on one pay-day comes back through the shops to the banks by the next, no additional strain is put upon the banks' cash reserves. From the time when earnings first rise, there begins a gradual accretion of people's cash balances, which will continue until these balances are in due proportion to the increased earnings. But even if there were no *further* increase in earnings, this process would take a considerable time. So long as credit is expanding, earnings are increasing. When credit begins to contract, earnings are at the maximum, and the cash portion of the unspent margin is still short of the level corresponding to this maximum. The wage-earners are, in fact, still absorbing more money than they spend.

The first impact of the credit contraction falls on profits; wages cannot be immediately reduced, nor will even employment slacken until pending contracts have been worked through. There therefore intervenes a period when the absorption of money into circulation continues notwithstanding the contraction of credit. At last the current is reversed, and the drain of money first ceases and then is replaced by a return of money to the banks. The depletion of people's cash balances is as gradual as their accumulation, and the return of money from circulation continues for a long time after the banks have ceased to contract credit. When the revival of business begins, there is a great accumulation of superfluous cash in the banks, which provides the opportunity for a renewed credit expansion.

The trade cycle or credit cycle is distinguished by a number of symptoms. Well known as they have long been, it is only in the past half-century that statistics have been recorded in so complete a form as to afford a full practical verification of the theory. The period of credit expansion is marked by rising prices, high profits, good employment, rising wages, high interest, falling bank reserves. The period of credit contraction is marked by falling prices, low profits, bad employment, falling wages, low interest, rising bank reserves.

The cycle is an *international* phenomenon. It extends to all countries with a gold standard. One gold currency cannot appreciate and depreciate independently of the others, though the uniformity of the cycle is interfered with by disturbances of the balance of payments in particular countries, such as those we examined in Chapter VII.

The whole cycle, as it was experienced between 1815 and 1914, would occupy from seven to eleven years. The length of the cycle was determined by the rate of progress of the processes on which the cycle depended, the absorption of currency during the period of expansion and its return during the period of contraction. The rate of progress was slow, and the period was long, because the processes took place in a huge international system linked together by a metallic currency (gold and silver up to 1872, and thereafter gold alone). Since 1914 there has been no such international system. Expansions and contractions of credit have not been tied to gold, and have occurred independently in different countries. Expanding credit and feverish activity in some countries have synchronised with contracting credit and profound depression in others. Alternations of expansion and contraction, lacking the momentum of an international system, have been far more rapid and irregular. Only in 1925 was anything like an international gold standard re-established.

If that meant a reversion to the pre-war methods of regulating credit with reference to gold reserves, the trade cycle would reappear with all its troubles and distresses. The Genoa Resolutions of 1922, combined with the credit policy adopted by the Federal Reserve Banks in America during recent years, hold out hopes of a more scientific system.[1] A timely intervention by the central banks of the world, to check an expansion of credit before it has gone too far, will escape the need for a subsequent contraction. The price level all over the world will become relatively stable ; the unemployment and financial crises associated with the fall of prices will be avoided ; so will the friction arising from the continual adjustment of wages to the cyclical variations in the purchasing power of money.

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[1] See *Monetary Reconstruction*, pp. 144-5 and 162-4.

CHAPTER X.

FINANCIAL CRISES.

If the remedy for a disorder in the currency system is to be found in the control of credit, we have to consider not only the sensitiveness of credit to the control exercised by the banks, but also the possible magnitude of the disorder to which the remedy is to be applied.

What is the greatest strain to which the currency system of a country is likely ever to be subjected?

From the point of view of any single nation the problem presents itself as that of controlling the foreign exchanges, and the maximum strain means the maximum drain of gold.

We have already seen that credit is by nature unruly. It is always straining at its tether, or rather, it is perpetually starting to run away, and then being pulled up with a jerk when the limit of inflation consistent with the maintenance of the metallic standard is reached. Even with the test of the foreign exchanges always in being to give warning when the situation is getting out of hand, the necessary precautions may nevertheless not be taken, and the result will be a break-down.

It may be that with some new development of business the banks, from sheer inexperience, are beguiled into the easy path of granting credit in ever-growing volume. They follow the line of least resistance, like a novice in the art of bicycling, who spins gaily along before the wind for the first time, surprised and delighted to cover the ground so easily, and without suspicion of the struggle awaiting him when he has to return against the wind. Or it may happen that a Government is driven under the stress of some imperative need to create credits, which are known all the time to endanger the value of its currency. This happens above all in time of war, and indeed the effect of war on credit and currency is of such special importance that it will require separate consideration at a later stage.[1]

Against the folly or ignorance of bankers and Governments, and against the stress of war, no gold reserve, however great, is an adequate protection. It is easy to see how the line of least resistance will always lead to greater and greater inflation. If an inflation of credit once begins, the consequences will be felt in a withdrawal of gold. In a country with a paper currency dependent on the supply of gold, as much as in one with a gold currency, this will produce what to the banker and trader appears to be a shortage of currency. They will clamour for *more* currency, and, in so far as they are guided by their immediate interests, will resist proposals for raising the rate of interest and restricting credits.

It might be supposed that a rise in the rate of interest would be profitable and attractive to the banker, since his profits are proportional to the rate of interest which he charges to his customers. In practice, however, this is not so. The first step is to raise not the market rate but the Bank rate. The market rate only follows the Bank rate, because the high Bank rate obstructs advances of legal tender money from the central bank. In the first instance, therefore, a high Bank rate intensifies the shortage of currency and increases the embarrassments of the bankers. It is a poor consolation to the banker, who sees his cash reserves dwindling, that the corresponding contraction in his business will necessitate an increase in the rate of interest which he charges to his customers. He cares more to increase, or at any rate to maintain, the extent of his business than to reap such additional profit as even a high rate of interest will give him for a short time on a reduced volume of loans.

To the trader the high rate of interest presents itself in the first instance as an expense to be subtracted from his profits, but behind this initial loss looms the far more serious menace of a difficulty in borrowing, which will affect not merely himself but those to whom he hopes to sell.

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[1] See chaps. xiv. and xv.

A central bank or a Government will only be human if before the protests of the business world it shrinks from the paradoxical course of remedying a shortage of currency by making a still greater shortage. If it gives way, if it tries to make up the shortage of currency by further issues, and does not at the same time insist on a high rate of interest, the inflation of credit will quickly be intensified, the fresh supply of currency will be steadily drained away into circulation, and the withdrawal of gold for export will continue. There will soon follow a renewed clamour for more currency, and, if the same situation is dealt with in the same way, it is inevitable that the system by which the note issue is related to the stock of gold will break down. There will be one of those infringements or amendments of the law to which we referred in Chapter VI.

This will be an opportunity for a reconsideration of policy; if the opportunity passes and still there is no restriction of credit, the next stage will be the actual or threatened exhaustion of the stock of gold and a suspension of gold payments. The moment the free payment of the legal tender notes in gold stops, they will begin to fall to a discount, and the foreign exchanges, already up to the export specie point, will become more adverse still. The failure to maintain gold payments marks the cutting adrift of the country's currency system from that of the gold-using world; it means that business, which till then has been stimulated by the inflated turnover of credit, and therefore of purchasing power, begins to be disorganised by doubt as to the value of the monetary unit. Its value is palpably falling, but no one knows how rapidly it will fall; it cannot be permitted to fall indefinitely, or all measure of value will be lost, but no one knows when the limit will be reached or a recovery will begin. The recovery can still be started by a high rate of interest, but even without that the mere disorganisation of business may of itself check borrowing and help to stop further inflation. Once the vicious circle of expanding credits and rising prices has been broken, the central bank can regain control of the situation, but the accumulation of unexecuted orders to producers which usually accompanies a period of inflation will probably prolong the expansion of credit for some time after the loss of confidence has begun. It is likely therefore that before stable conditions have returned there will be a material depreciation of the currency. If the old standard is ever to be regained, there must ensue a long and painful period of contracted credit.

There had been so much bitter experience of this rake's progress, that for a generation or more before 1914 the great central banks had been alive to the importance of keeping control. Perpetually watching the foreign exchanges, all kept pace together, and so long as they did so, no serious gold movements occurred, except for the usual stream of metal from the gold-mining countries. It was shown in Chapter VII. that as a result credit expansions and contractions tended to be world-wide, though the susceptibility of any particular country to their effects depended upon its special circumstances.

A world-wide contraction is only necessitated by a pre-existing expansion. The countries which participate in the expansion experience a growing demand for money for internal circulation. This demand denudes the banks of their reserves of legal tender money, and they in turn have to draw fresh supplies from the central bank. The time arrives when in one or more countries these fresh supplies cannot be provided without exhausting the surplus reserves of gold and running the risk of a breach of the law by which the paper currency is regulated. At this point the contraction of credit begins. The centres so threatened raise the rate of interest or take other means of contracting credit, and as soon as these measures become effective they begin to draw gold from abroad. But other countries will for the most part be unable to spare gold, and must respond by raising the rate of interest in their turn. In a short time credit begins to contract everywhere. But the different financial centres are likely to find it more difficult to keep pace in a credit contraction than in a credit expansion. In a general credit expansion the country which gets a little ahead can easily slow down by raising the rate of interest somewhat above the prevailing level. In a general credit contraction the country which drops behind can only save itself by increasing the pressure which, though perhaps already great, has been found insufficient. If drastic action be then taken, resulting in a correspondingly severe fall in the values of commodities and securities, there may ensue a financial crisis.

The characteristic of a crisis is widespread bankruptcy. A fall of values diminishes the assets without lightening the liabilities of the trader who is carrying on business with borrowed money. The failure of the trader may endanger the solvency of his banker, whose assets, though of a fixed money value so long as they are good, depend for their security on the assets of his customers. The failure of some banks, coupled with the reluctance of those which remain to lend, drives traders to sell instead of borrowing, in order to raise the ready money necessary to meet their immediate liabilities. Panic supervenes when the depreciation of values is intensified by these forced sales.

This sequence of events is not necessarily caused only by a credit contraction. At a time when credit is normal or quiescent, an unexpected drop of prices in one market or group of markets may cause embarrassment and failures. The trouble is apt to spread. In the first place, traders who are insolvent or are suspected of insolvency cannot borrow, and are compelled to sell. Forced sales depress the prices of any realisable goods and securities they may possess outside the markets originally affected. Secondly, the failure of a trader destroys a part of the assets of a banker who has lent to him. This may not of itself restrict the banker's operations in any degree ; he can best recover his position by maintaining or even extending his business, and using a part of his profits to build up a capital reserve or surplus. But a crop of business failures will make the banks cautious in lending. They have a smaller margin of capital to cover risks, and will be less ready to lend on the unsupported security of a merchant who may to-morrow suffer the same disasters that brought down his neighbours yesterday. And every firm which has suffered losses has become a less desirable borrower than before.

By the reluctance of the banks to lend, the area of forced sales will be extended. There will also be a diminution of the consumers' income and consumers' outlay and a general falling-off of demand in all markets.

The effect upon credit will be more serious if the commercial failures are so severe as to ruin the banks which have lent to the insolvent firms. If a bank is distrusted and a run occurs, a general demand by depositors for their money, the bank will, for the time being, be disabled from lending, and will be driven itself to realise securities or to borrow.

The failure of an important bank has a violent effect upon credit operations. The obligations of a solvent bank are from the point of view of its creditors simply the equivalent of so much money. Let the bank become insolvent, and these obligations are, as it were, petrified. They become deferred claims to share in a fund of problematical value. If there is a prospect of the assets turning out well, other banks may grant cautious loans on the security of these claims, but well within their face-value. But a great part, at any rate, of the purchasing power represented by the defunct bank's liabilities is annihilated.

Again, a bank knows its customers' affairs, and if it fails they cannot so readily obtain loans from other banks to whom they are strangers. Therefore not only does the prospect of the loss of, at any rate, a part of the sums due to them from their bankers weaken their financial position, but they cannot easily find lenders willing to advance even such loans as their financial position still justifies. The destroyed purchasing power cannot be immediately replaced, and till it begins to be replaced the consumers' outlay will be proportionately less than before.

Thus insolvencies, even though they may be started at a time when prices are not falling, tend to produce a fall of prices, both because they destroy credit and because they discourage the creation of credit.

If the cash reserves of the banks are adequate, and there is no pre-existing credit pressure, the situation will remedy itself. The banks which remain standing will be ready enough to lend to anyone whose solvency is beyond doubt or who can offer ample security, and the normal stock of purchasing power will be thereby reconstituted.

If the country in which the crisis occurs is linked with its neighbours by a common gold standard, the prices of foreign trade products will be governed by world prices, and the drop in the price level will in that direction be limited. In so far as traders possess assets, existing or prospective, of a value determined by world prices, they will find relief from the pressure in that they can either realise these assets under conditions free from the pressure in the home market, or can borrow on them. Even where the crisis has been caused by a collapse of the price of some foreign trade product, it is still an advantage to be able to avoid the *further* fall of price that would be caused by forcing sales of the product in a limited and panic-stricken market at home.

The relief obtained from access to world markets might take the form simply of providing solvent borrowers and good security to enable the banks to create an adequate supply of credit. In that case, a crisis, or at any rate, a panic would probably be averted altogether. But if, owing to a shortage of gold or for any other reason, the banks do not take advantage of the opportunity, the result will be that a part of the disposable assets will be sold abroad. If the credit machine has really broken down, solvent traders who cannot borrow, and are driven to sell whatever wealth they can realise, will find themselves helpless in the flagging home market, and will rush to offer goods and securities in any foreign market where they can find purchasers. The sudden heaping up of credits in foreign countries at the disposal of traders who are in urgent need of ready money at home will immediately react on the foreign exchanges. The exchanges will become very favourable, and gold will flow in ; this influx of gold will help to make up the shortage of purchasing power, and to start the banks lending again. At this point it is possible to see clearly the intimate relation between crises and a world credit contraction. For if a crisis develops in any country at a time when there is surplus gold elsewhere, and if the gold imports secured by the country in course of reconstituting its credit system can be spared without causing a shortage of reserves in the countries from which they are taken, this disturbance dies away without any ulterior effects. But if a shortage of reserves is caused, a contraction of credit is started throughout the gold-using group of countries, and a fall in world prices intensifies the troubles of the crisis centre.

It will be borne in mind that the hypothesis which led us to the subject of crises at the beginning of this chapter was a world-wide contraction of credit, and we supposed the crisis itself to be caused by the consequent fall of prices in some country where the effects were especially acute. There is *already* a shortage of gold. As soon as gold begins to flow towards the crisis centre, other countries, to safeguard their reserves, must resort to a contraction of credit almost as drastic as in the crisis centre itself. Little or no relief can then be derived in the crisis centre from sales abroad.

It is under these conditions that the great crises of history have occurred. So long as credit is expanding, unsound businesses can usually stave off bankruptcy ; it is the failure of markets and fall of values associated with a credit contraction that bring them down. Prices in world markets have been pushed up to a level at which the currency systems of the world, with the available stock of gold, cannot maintain them. The drain of gold or of paper based on gold into circulation is the signal for the inevitable contraction of credit and deflation of values. It is then that a crisis is most likely to occur, and, occurring, is likely to be most severe, inasmuch as world markets themselves can afford no relief.

Where will crises occur ? What conditions predispose one country rather than another to be the scene of a crisis when a world credit contraction takes effect ?

The credit contraction starts in those countries which feel the shortage of gold. They tend to draw gold from the others, and these latter are compelled to follow their example. The general credit contraction so set on foot brings about a fall in the world price level; it raises the wealth value of gold. To each individual country the process presents itself as a shrinkage of demand in world markets for foreign trade products. Its exports fall off, and the supply of imports at a given price level is increased. In order to avoid an adverse balance and a loss of gold, it must reduce the consumers' outlay.

The *extent* of the reduction required depends on a variety of circumstances. The fall in the price level of the particular selection of foreign trade products in which the country is interested may be either greater or less than the fall in the world price level. And the fall required in the price level of home trade products may similarly differ from the fall in the price level of the foreign trade products.

Exports are usually more specialised than imports; they include one or several staple products for the supply of which the exporting country is especially fitted. The effect of the credit contraction upon these products may be either greater or less than the general average for all products. If imports are more highly diversified, there may yet be some among them in which the country's banking system is more especially concerned. If the country is an international financial centre, certain products may predominate among those financed by it in world trade.

By a credit contraction, as by a credit expansion, different commodities are affected very unequally. The man who finds he has less to spend will economise more drastically on some than on others. The demand for necessaries, such as the staple kinds of food, will be maintained; the demand for luxuries will fall off. The demand for durable goods, which can be made to last a little longer than usual, will be more affected than that for goods which are used up in the process of being consumed. Tobacco will be more affected than bread, and boots more than tobacco. The demand for manufactured goods will, in general, be adversely affected. But in the case of manufactures output readily adjusts itself to demand, and the effect is felt rather in unemployment than in a collapse of prices. In the case of natural products supply cannot be easily or promptly restricted. Raw materials of manufacture are often very sensitive in their price movements. The demand for materials is derived from the demand for the finished products, and concessions on the prices of the former may do little to stimulate the demand for the latter. The same is true of feeding stuffs.

For any product, sensitiveness of price to a general shrinkage of demand (a reduction in the consumers' outlay) is the resultant of the qualities commonly called elasticity of demand and elasticity of supply acting in opposite directions. When a shrinkage of demand has to be distributed over all the products in the market, those will suffer most for which the demand is most elastic, and the actual effect of a curtailment of demand upon price will be greatest for those of which the supply is most inelastic.

This applies equally to home-trade products. The extent of the contraction of credit is dictated by the need for restoring equilibrium in the balance of payments; the demand for foreign trade products must be damped down. But incidentally the demand for home trade products is also damped down. They may be either more or less sensitive than the foreign trade products. To adapt the credit system to an apparently moderate depression of world markets might require a very severe contraction, if the demand for home trade products shrinks much more in proportion than the demand for foreign trade products.

The breeding ground for crises is to be found not only in the commodity markets but at least equally in the investment markets.

Whereas the forced sales of commodities come from dealers in those commodities, embarrassed by the failure of their market, the forced sales of securities come from two sources. They come partly from embarrassed dealers in securities, but partly also from traders and bankers who keep a reserve of securities to borrow on or in the last resort to sell, in case they cannot raise cash by any other means in an emergency. These reserves are naturally held as far as possible in securities of an international reputation, which can be readily sold abroad. As a rule, the first premonitory symptom of a crisis is a stream of sales of these securities. A crisis does not break out without warning at the turning-point of a great trade expansion. According to the more usual sequence of events, the trade expansion is first of all checked by a drastic curtailment of credit, and there then follows an uneasy interval of perhaps some months while the weaker traders are battling against failing demand and falling prices to keep solvent. During this interval they will have recourse to the sale of their reserves of securities, and when these reserves are exhausted the failures will begin. A serious fall in the prices of securities will precede the crisis itself, and this will impair the solvency of the dealers in investments. But these dealers are at the same time as much exposed as the dealers in commodities to the adverse influence of the credit contraction. Indeed, the nature of their market is such that they suffer more from the credit contraction than the merchants.

As the merchant depends on the consumers' demand to dispose of the commodities in which he deals, so the investment market depends on the investors' demand to absorb its securities. If its indebtedness to the banks is not to increase, the sale of securities to the public must keep pace with the new issues for which the market makes itself responsible. At a time when credit is expanding and production is profitable and active, there is likely to be a great pressure of new issues to provide fixed capital for the increased production and so to take advantage of the favourable trade conditions. When the tide turns, and steps are taken to restrict credit, the consumers' outlay, of which investment forms part, suddenly shrinks. But the various schemes for the employment of fixed capital cannot be abruptly abandoned or even curtailed beyond a certain point. When investment suddenly shows a great falling off, the investment market finds itself loaded up with securities, largely new issues, which can only be carried by means of increased loans from the banks. Savings, being the surplus on income after all personal expenditure has been met, are very sensitive to changes in the amount of income. Investment is therefore the most variable part of the consumers' outlay, and the investment market has to face greater fluctuations in demand than the market for commodities. At the same time the forced sales of securities held by bankers and traders as reserves contribute further to the overloading of the market and the depreciation of security values. Thus the solvency of stock-jobbers and finance companies is more likely to be threatened even than that of the merchants, and forced sales of securities will be an even more characteristic feature of a crisis than forced sales of commodities.

Stock exchange securities fall broadly into two classes—shares, whether ordinary or preference, which yield *variable* dividends; and debentures, Government stocks, municipal stocks, bonds, etc., which yield *fixed* dividends or interest. Variable dividends depend on profits, and are susceptible to all the influences which affect the market for the goods or services produced. When easy credit stimulates trade and prices rise, profits and dividends are high, and the prices of shares are high, for the prospect of high dividends, even for no more than two or three years, adds very materially to the value of shares. When credit contracts and prices and profits fall, shares fall. Fixed interest-bearing securities tend to follow exactly the contrary rule. When trade is active and high profits can be obtained from the use of money in trade, the prevailing rate of interest is high, and consequently the price of a security bearing a fixed rate of interest is low. When trade is bad and profits low, the price of a fixed-interest security rises. At a time of crisis, and in the uneasy period which precedes it, the prices of all securities are depressed. Shares fall because trade has passed its zenith; fixed interest securities fall because of the forced sales.

It is the shares that are sensitive to a credit contraction. The value of a share represents capitalised future dividends. The dividends depend on the profits of production and trading. Profits, being the margin of price over costs, vary (over short periods) more than price. And if there are fixed charges (for debenture interest, etc.), the residue varies more than the total profit.

If a concern has a total capital of £1,000,000, of which one half is in 5 per cent. debentures, then gross receipts of, say, £200,000, less working expenses of, say, £150,000, would leave a net profit of £50,000, which would pay the debenture interest of £25,000, together with 5 per cent. on the £500,000 of share capital. If the gross receipts rise 20 per cent. and the working expenses 10 per cent., the former will be £240,000 and the latter £165,000. The net profit will be £75,000, which will be sufficient to pay the debenture interest and leave £50,000 to pay a 10 per cent. dividend on the shares. Thus the dividend can be doubled by a moderate increase of prices and output. The shareholder is the residuary beneficiary of the profits, and, where the rise of price is large, the increase in dividends may be enormous. A dividend of 30 or 40 per cent., with the prospect of two or three future dividends on a similar scale, will send the market value of the shares soaring.

The value of the shares reflects and exaggerates the movements in the price of the product. Even where the charges are regulated by authority and cannot rise, as in the case of most railways and public utilities, there is still room for large fluctuations in the price of shares. In undertakings of that type the overhead costs are high, and an increase of activity brings a relatively large increase in net profits.

It follows that a country with a big market in shares is vulnerable. And as some shares will be very much more sensitive to a general shrinkage of demand than others, any investment market which happens to specialise in exceptionally sensitive shares is likely to become the scene of a crisis.

On the other hand, a big investment market is likely to be associated with a big export of capital. New issues are brought out in the old countries to provide capital for the new. As we saw above (pp. 115-16), when the supply is cut off by a curtailment of the consumers' income and the surplus of savings in the old countries, the new countries suffer an adverse balance of payments, and have to effect all the greater contraction of credit ; the old countries gain a favourable balance, and secure equilibrium with a milder contraction.

Any country which is the seat of exceptional capital development at a time of trade activity runs a risk of a crisis when the activity comes to an end, even if it is supplying all the capital resources out of its own savings and is not importing capital. There are commitments ; enterprises have been begun on the assumption that the resources of the investment market will suffice to finish them. Half-finished they have no selling value, except to some one who is in a position to buy them with a view to finishing them. When the supply of savings falls off, there will be great pressure upon the investment market to supply the requisite funds, and through the investment market on the banks. If the banks lend to the investment market, they create purchasing power ; the consumers' income is swollen by the payments made to those engaged in constructing the works in progress. The commitments are an obstacle in the way of credit contraction, and the contraction, to be effective, has to be by so much the more severe. Where businesses obtain direct advances from banks for the construction of fresh capital without approaching the investment market, the danger is greater still.

If shares in the new enterprises could be sold abroad, the pressure would be relieved. But securities with an international market form a special class. If those now in question do not belong to it, that means that they, or rather the capital enterprises they stand for, must be classed as home trade products. The case is then an instance of those in which the compression of the demand for home trade products has to be disproportionately heavy in comparison with the compression of the demand for foreign trade products.

Since the world credit contraction is transmitted to each country through the foreign exchanges, the susceptibility of any country to it will be modified by anything which disturbs the country's balance of payments. This is in many ways a matter of chance. In one country a crop failure may intensify the depression ; in another plentiful crops may mitigate it. When the supply of investible savings in the world as a whole falls off, investment in a particular country may yet be maintained, or even increased.

The distinguishing characteristic of a crisis is the pressure to sell caused by the peril of bankruptcy. The pressure is not confined to the trader who is actually holding part of his stock-in-trade with borrowed money, and who finds his assets depreciating relatively to his liabilities. The trader who has ordered goods which have not yet been delivered is equally embarrassed. When prices are rising, he buys forward, to guard against a future rise. It is these forward commitments that tend to produce an exaggerated trade activity and to make the activity difficult to check.

In the first instance, when trade activity is just beginning, forward commitments are negligible because producers can deliver goods almost as fast as they are ordered. Presently in one industry after another production overtakes capacity, and orders can only be accepted for future delivery. The incomes derived from production are proportional to the work *in hand*, and, as this is increased both in volume and in price, stocks of finished products have to be drawn on to satisfy the addition to the consumers' outlay. The merchant finds his stocks of finished products dwindling and his *prospective* stocks, in the form of obligations to take delivery of goods when completed, growing. The merchants' indebtedness to the banks is diminished, while that of the producers is increased.

These forward commitments are the source of the latent demand for credit to which we referred in Chapter II. and Chapter IX. When a credit contraction begins to take effect and productive activity falls off, merchants find that they must take delivery of more goods than they can sell. Prospective holdings of goods are transformed into actual, and the merchants are compelled to borrow in order to discharge their obligations.

The unfortunate merchant finds not merely that his goods cannot be turned into cash so quickly as he had hoped, but that he cannot get so much cash for those that he does sell: the value of his assets, actual and prospective, has to be written down to the new level of prices, while the value of his obligations, actual and prospective, remains fixed in money.

The danger may be intensified by purely speculative transactions, where, for example, a dealer buys forward, not simply to cover the future requirements of those to whom he is accustomed to sell, but in the hope of selling at an enhanced price *to other dealers*. Such speculative dealings are a double source of danger, in that the artificially swollen demand exaggerates the rise of prices, and the volume of liabilities, forming the potential field of bankruptcies, is enlarged. The liabilities are particularly dangerous because the seller for future delivery, who is the creditor, does not take the same precautions as a banker to see that the debtor's resources provide an adequate margin.

Among the various groups of commodities speculation fastens especially upon natural products and materials, not only as being sensitive in price, but as lending themselves to specification by grade or class (a characteristic which is essential to a bargain for future delivery).

Speculation is not necessarily, or even usually, confined to the country which produces the commodities concerned. On the contrary, it arises at the great marketing centres where they are dealt in. If a collapse of the speculators is started, the pressure will be felt in those banking systems by which traders in the commodities affected are financed. The speculators themselves may not be borrowers on any considerable scale from the banks, but in that case their default will inflict loss on their creditors, who are left with goods on their hands, which must either be sold or carried with borrowed money. Thus a speculative collapse in one place may start a crisis in another, either in a country which produces the commodities, or in one which consumes them, or in one which merely finances them at an intermediate stage.

Speculation is a factor even more in the investment markets than in the commodity markets. Stocks and shares are the speculator's favourite field; here specification of the thing bought and sold involves no complicated questions of grading and sampling, and the price is both fluctuating and sensitive.

A speculator may hold shares himself with money borrowed from his banker, or he may arrange for a stockbroker to carry them for him. In the former case he is relieving the investment market of part of its normal holding of securities, along with the corresponding burden of indebtedness; in the latter he leaves the holding and the indebtedness of the market unchanged.

A bank, whether it is lending to a stockbroker or to an amateur speculator, will not lend the whole value of the shares deposited with it. It will insist on a "margin," depending upon the marketability of the shares and the probable extent of the fluctuation in their price.

In case of a fall of the price of any share, the speculators in it will be called upon to improve the margin, either by depositing additional securities or by paying off part of the advance. In default of compliance the shares will be sold, and the proceeds applied to paying off the advance. Here arises the danger of forced sales. But the banks aim at requiring sufficient margin to guard them against loss even in this contingency, and if they have done so there will be no crisis. All that will happen will be that the weak speculators will be ruined, and the strong ones (those who, having adequate resources of their own, are eligible borrowers) will be able to buy the shares cheap.

The principal dangers which threaten the credit system from speculation in shares are to be looked for in another direction. Speculation tends to increase the total amount borrowed for the purpose of holding shares. This is so, even when the speculators do not themselves borrow from the banks, for the stockbrokers, regarding themselves as agents borrowing on behalf of their clients, tend to borrow more in the aggregate than they otherwise would.

If some dealers in the investment market thus borrow more, others must find themselves borrowing less, and become ready to make up the difference by buying more securities. The supply of securities can be increased either by new issues, or by purchases from abroad. Purchases from abroad may supply a corrective, in that the resulting adverse balance of payments and loss of gold should lead to a restriction of credit. Even if the restriction is not made effective till the world contraction of credit begins, the mere cessation of the purchase of foreign securities will then be a relief.

If, on the other hand, the additional borrowings of the investment market are applied directly or indirectly to floating new issues, a dangerous situation will arise. An artificial addition is made to the fund of investible savings, already swollen by the high profits derived from active trade. New enterprises are started, involving commitments for constructional work extending over long periods. Subscribers, whether they be investors, speculators, or underwriters, bind themselves to pay a series of instalments extending some time into the future. The latent demands for credit which we have already shown to arise from commitments of this type are obviously aggravated by the existence of speculative holdings of shares.

The dealer or speculator in stocks and shares usually borrows either "at call" (that is to say, as in New York, he may be called upon to repay at any time), or else for short periods (in London from one fortnightly account to the next). A sudden general fall in the values of speculative shares (such as may easily arise from a fall in commodity prices) precipitates a wholesale calling up of loans. A feature of the great American crises has been the violent rise in the rate of interest on call money, which has sometimes risen, in the form of a commission on renewal, as high as ½ per cent. per day.[1]

There is *no* demand for securities except either from investors with savings to spare or from people (whether dealers or speculators) who must borrow in order to buy. When the speculative demand runs high, the amount of securities held with borrowed money is extended. When the turning-point comes, and the banks call in their loans, an investment demand cannot be created in a moment, and deadlock supervenes.

Here, as in the case of speculation in the commodity markets, the point at which the pressure will make itself felt in the credit system is among the banks which have lent or are expected to lend. The pressure may come from the speculators themselves, from the stockbrokers, from the promoters who have made themselves responsible for the enterprises, or from the contractors who are engaged on the works. The danger arises from the intensity of the pressure, and from the heavy and sudden loss entailed upon people, who are already probably considerably indebted to the banks, by leaving a capital enterprise derelict.

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[1] In 1884 call money is said to have been quoted at the fantastic rate of 4 per cent. per day (see *History of Crises under the National Banking System*, by O. M. W. Sprague). This, the price of one day's respite from bankruptcy, was more like blackmail than interest. The even higher rates charged in Germany in 1923, were quite different; they were compensation for the probable depreciation of the currency in which the debt was reckoned.

The conditions predisposing to a crisis that we have so far dealt with are those arising from the state of markets—the sensitiveness of commodity prices, the relations between the internal and the external price level, the state of the balance of payments, capital commitments, speculation. The actual outbreak of a crisis will depend at least as much on monetary conditions at the threatened point. Any country which has difficulty in keeping pace with the world credit contraction is threatened with a loss of gold. The intensity of the credit contraction which it must impose is then governed by the amount of gold it can afford to lose.

The outflow of gold will be determined by the adverse balance of payments, and the adverse balance will depend partly on the magnitude of the country's trade in foreign trade products, and partly on the circumstances we have examined above, such as the sensitiveness of its exports, the insensitiveness of its imports, the amount of its exports or imports of capital, etc. With a given outflow of gold, the amount of the available gold reserve will determine a period within which the contraction of credit must become completely effective, that is to say, must so raise the wealth value of the currency unit as to restore equilibrium in the foreign exchanges.

The responsiveness of the foreign exchanges to a credit restriction we examined in the last chapter. In proportion as the foreign exchanges are irresponsive, the pressure must be intensified to achieve equilibrium within the period set by the gold reserve. An adequate gold reserve is the best safeguard against a crisis ; it gives a breathing space during which the contraction of credit can be eased. It will not save a country which is deeply involved in some staple product with a world market, for which the demand has disastrously collapsed. But at any rate it avoids reinforcing the distress of the markets in foreign trade products with a catastrophe in the market for home-trade products.

Any country which can spare gold will be helping to ease conditions elsewhere. Clearly there are advantages in a currency law which will ensure the initiation of a credit contraction at a time when there are still large stores of gold in the background, *provided* those stores of gold are made available for use. The Bank Charter Act of 1844 did ensure the accumulation of a second-line reserve of gold, but did not make it available. When the available margin of gold became very narrow, a convulsive contraction of credit was applied, and only *after* a crisis had broken out and the harm had been done, was the gold released by a breach of the law.

When a crisis breaks out anywhere, the pressure everywhere is accentuated. The relief obtained by the crisis centre through sales abroad and imports of gold is at the cost of transmitting the pressure in some degree to other countries. This occurs in two ways. First, the forced sales tend to lower prices in international markets. Secondly, the gold is taken from the available reserves of other countries.

Forced sales from a single country probably would not very greatly depress the world price level *as a whole*. But if, as is often the case, the country specialises in a particular product, forced sales of that product may cause a collapse of the price, and there may result serious embarrassment both among rival producers and among the merchants who hold stocks of it. The collapse and the panic would be thereby intensified, and sales in the world market would no longer afford relief, so far as that product is concerned. And there may be a crisis in a country which is a producer on a large scale of each of a considerable number of commodities in which there are important world markets. The great crises in the United States (those of 1857, 1873, 1893, and 1907) had a devastating effect upon world markets.

Equally catastrophic is a crisis in a country which is a great financial centre. The merchants whom it finances are driven to effect forced sales all over the world, and precipitate falls of prices occur in many of the staple products.

The amount of gold attracted by the crisis centre depends partly on the magnitude of its forced sales, but partly also on its credit machinery. As we saw in the last chapter, the predominant power is in the hands of a country which is a great financial centre. It is there that a crisis is most dangerous to the rest of the world. On the other hand, it is there that a crisis is least likely to occur. The interests on which its banking system is based are the most varied, and its power of attracting gold rapidly ought to make convulsive credit restrictions unnecessary. From the end of the Napoleonic Wars up to 1866 each successive climax of the trade cycle was followed by a crisis in London. But thereafter, till 1914, crises ceased (except for the half-suppressed crisis of 1890), and the reason was partly, no doubt, that the regulation of credit was then better understood, but partly also that the predominance of London in the world credit system had become much more pronounced.

We started this chapter by asking what is the greatest strain to which a currency system is likely to be subjected. We may now answer the question by saying that of all the different strains, apart from war, to which a currency system may be exposed, the most severe is that of a serious *external* crisis, a crisis in a neighbouring country of commercial and financial importance. There is, as it were, a discontinuous and substantial appreciation in the wealth value of gold, to which all gold-using countries must adapt themselves forthwith on pain of exorbitant losses of gold. The wealth-value of gold was *already* appreciating faster than the country in which the crisis has broken out could stand. Suddenly it begins appreciating faster still, and the others have to stand the increased strain.

While credit is expanding, a crisis is very unlikely to occur. Whatever may happen to particular individuals, there will be a general tendency for assets to grow faster than liabilities. But crises may occur at any stage of a credit contraction. The same period of contraction may be marked by a series of crises in widely-separated centres at considerable intervals.

In view of the variety of circumstances by which the effect of a crisis in one country on another may be accentuated or diminished or delayed, it is not surprising that the crises which occur in a single period of contraction do not exactly synchronise. In 1836 a severe crisis broke out in England. In 1837 it spread to the United States. In 1838, when England had already entered upon a period of quiet recuperation, it broke out in Belgium, France, and Germany, and in 1839 it spread again to England and the United States.

The crisis of May, 1866, in London, one of the most severe ever experienced, though apparently isolated, was really the sequel of the crisis of the autumn of 1864, which extended over the Continent, but which was not so acute in any one centre. Failures were fairly numerous in 1864, both in England and elsewhere, and the Bank rate was raised to 9 per cent. in London and 8 per cent. in Paris. As it turned out, the pressure on the money market was sufficient to stop the credit expansion in France, but not in England Apparently the explanation is that, whereas in France the trade activity had been mainly commercial, in England it had been rather in the nature of capital speculation. Under the influence of recent legislation there was an immense development of limited liability companies. In particular, there were a number of new finance companies, which adopted the very dangerous practice of making temporary advances to railway contractors on the security of shares in the new railways. The effect was that after the mercantile failures of October, 1864, in which England had her full share, the credit expansion was continued in the form of advances for capital expenditure. So long as the public could be induced to buy shares rather than commodities the inflation of the consumers' income did not result in an undue amount of purchases from abroad, or make the exchanges unfavourable. An isolated credit expansion thus held progress in England, when the similar movement abroad had already been brought to an end by the crisis of 1864 and the accompanying fall in values. Finally, in May, 1866, after an interval of a year and a half, the crash came with the failure of Overend & Gurney, one of the largest discount companies, and a number of other important banks and financial houses.

There supervened a condition of things which puzzled economists, both then and since. For two months the Bank rate remained at 10 per cent., while the bank rate in Paris was no more than 4 per cent. Yet gold was not attracted from France to England. The magic of the Bank rate seemed to have vanished. Macleod attributed this phenomenon to a complete loss of confidence in English borrowers. Continental lenders would not risk the loss of their capital for the sake even of 10 per cent. interest. No doubt credit was shaken, but that it was shaken to this extent can hardly be supposed. The credit expansion having continued in England after it had ceased abroad, it was only natural that time should be needed to bring down values in England to the Continental level. Neither the forced sales of the crisis nor the pressure of 10 per cent. would necessarily have this effect immediately, especially as the disposable assets of the finance companies which collapsed were largely shares in speculative English railways which could certainly not be sold abroad. Probably the English money market was so swollen with credit that when the tide of speculative investment ebbed, the exchanges would, but for the remedial effects of the crisis itself, have become violently unfavourable. That the remedial influence of a high Bank rate on this situation should take time is not surprising. All that requires explanation is that this big discrepancy between discount rates did not attract available balances from Paris to London in sufficient volume to rectify the exchange position.

We showed in Chapter IX. that the flow of balances that can be attracted from one centre to another by higher discount rates is not unlimited. All the funds sent have to be diverted from other forms of investment, temporary or permanent, in the countries from which they come. (The exchanges must be at, or near, the point at which gold is *imported* into those countries, for otherwise there would be an exchange risk to allow for.) The readily available funds are likely to be absorbed in a short time, and as soon as the flow slackens, the support given to the exchange diminishes.

At the time of the crisis of 1866 discount rates had already, for many months, been substantially higher in London than in Paris. A spasmodic increase in the gap between them might give but a very moderate stimulus to the flow of balances. As the limit of available balances was approached, the flow would fall off, and the exchange would react. Under such conditions, progress would only be made towards equilibrium through the deflationary effect of the high Bank rate on the consumers' outlay.

The year 1890 saw a period of great trade activity culminate in a financial crisis, marked by the suspension of Baring Bros. in London. The ebb set in in Europe thenceforward, but the United States for the moment escaped its effects, thanks to a splendid harvest and a new tariff. In 1892 there began that export of gold which was a sure sign that values were on a higher level in the United States than elsewhere, and in the first half of 1893 the export was accelerated. There ensued the inevitable contraction of credit and a financial crisis all the more violent for being belated.

Indeed, it happens quite as often that a contraction of credit, spread over several years, is marked by a series of crises in different parts of the world throughout its progress as that a single collapse of values occurs, as in 1825, 1857, or 1907, all over the world at the same time.

CHAPTER XI.

FINANCIAL CRISES (*continued*).

A CRISIS may be regarded as a struggle to maintain the standard of value. It is indeed actually caused by a general fall of prices, which is merely another name for a *rise* in the value of the monetary unit. It being customary to measure all values in terms of the monetary unit, this is called a fall in the value of commodities, but of course the utility of the commodities is not diminished, and it is theoretically more rational to say that the value of the monetary unit has risen. And this is so, even where the monetary unit is a fixed quantity of a commodity such as gold, for gold, like lead or rubber or tram fares, may rise and fall in relation to other commodities. The true significance of a crisis is therefore this—that when the monetary unit has been allowed to depreciate it can only be restored at the cost of increasing the burden of all debts, and that, if this is done too suddenly, the debts outweigh the assets of the debtors and cause a multitude of failures.

If it be assumed that the gold standard is to be maintained at all costs, what measures ought to be taken to prevent a crisis, or, if that be impossible, to mitigate it? Clearly what is wanted is to save all those who are really solvent from being made bankrupt through the purely temporary difficulty of raising funds by borrowing or selling. The bankruptcies are caused by the fall in values, but the fall in values is intensified by the forced sales of those who are threatened with bankruptcy. If all the businesses concerned could be divided once for all into those which are hopelessly insolvent and must be allowed to fail, and those which can be saved, and if the latter were enabled to borrow, there would be no crisis. Forced sales would be useless for the one class and unnecessary for the other. This division into the sheep and the goats may be impossible. What is to be the test of solvency? Are assets to be calculated at "normal" values when they are for the moment unsaleable at those values or anything like them? If the crisis supervenes on a period of several years of expanding credit and inflated values, how far back is it necessary to go to find "normal" values? If a dealer in stocks and shares is loaded up with securities which cannot be realised in existing market conditions, who is to estimate the probability that those securities will yield a regular dividend in future? In practice the man whose solvency depends upon speculative assets cannot borrow. He must fend for himself, and must find purchasers if he can, either at home or abroad.

And the difficulties are aggravated by the general tendency to distrust bills of exchange, which are based on the *combined* credit of several parties. If there are many failures among the merchants and others who are financed by means of bills, then the banks and other financial houses whose names appear on the bills as acceptors or discounters may be overwhelmed with claims from the holders of the bills.

The crisis may be assumed to have originated in a dearth of legal tender money, necessitating a contraction of credit. The banks were unwilling to lend because any one of them that was more liberal in its advances than its neighbours would have to meet an adverse balance at the clearing house and lose cash which it could not spare. When the breaking-point comes and the failures and forced sales begin, prices fall headlong, and the danger of adverse foreign exchanges and a drain of gold is removed. That stage once reached, there is no longer any real reason for restricting the supply of legal tender money. That means that the central bank should be free to lend, for by lending it creates money.

The great English crises of the nineteenth century were exacerbated by limitations on the power of issue of the Bank of England. In those which occurred after 1844 the trouble arose from the limitation of the fiduciary issue. But a factor in the earlier crises was the limitation of the notes to denominations not less than £5. That made the use of gold coin indispensable for internal circulation, especially for the payment of wages. Even when the foreign exchanges were favourable, the gold reserves might still be threatened by an "internal drain" of gold.

In 1797 this danger was remedied by the issue of one-pound notes. At the time of the crisis of 1825 Bank of England notes below £5 had been again withdrawn, though they were not prohibited by law. In the midst of the crisis a forgotten chest of unissued one-pound notes was discovered, and they were sent out to the provinces, where they contributed materially to relieve the strain.

In the crises that occurred after the Bank Charter Act of 1844, the use of small notes in lieu of gold would, of course, have done nothing to avert the suspension of the fiduciary limit. But the gold reserve policy was necessarily governed by the possibility of an internal drain of gold, and, once the foreign exchanges had become favourable, the Government would have been readier to suspend the limit, if an internal drain of coin could have been guarded against by putting one-pound notes in circulation.

At the outbreak of war in 1914 it was fear of a demand for gold coin at home and not for export that struck the bankers with panic, and the currency notes for £1 and 10s. had to be improvised at very short notice to restore calm.

It was from English experience in the nineteenth century that was evolved the method of dealing with a crisis, which was enunciated by Bagehot and has held recognition ever since. The central bank ought to make advances without hesitation on any clearly good security which any borrower may offer, but it ought to charge a very high rate of interest.

Since nothing would ordinarily prevent the central bank from making advances on good security except anxiety regarding its reserve position, the first part of Bagehot's maxim means little more than that reserve laws should not be allowed to stand in the way. Logically, it implies, if need be, the eventual suspension of gold payments, though it is not clear whether he would have contemplated that.

The second part of the maxim means that credit restriction is to continue. Its universal applicability is open to doubt, but the presumption in favour of it is strong enough to make it a good practical precept. If the adverse exchanges and outflow of gold have been stopped, that is due to the breakdown of credit and the cessation of lending by the banks. If the breakdown of credit is too quickly and completely repaired, the outflow of gold will begin again. A high Bank rate is a restriction upon credit, but a less severe restriction than a general refusal to lend. It is a *transitional* measure to be modified as soon as the reserve position seems safe.

The conditions may be such, however, as to make this method of proceeding ineffective. More particularly there are two weak points in it. The insolvency may be so widespread that advances limited to good security may do little or nothing to save the situation ; or the credit inflation may be so excessive that the crisis itself is insufficient to restore the gold value of the monetary unit. For the former, there may, of course, be no remedy. The general insolvency may be due not only to the fall in world prices, but to a universal imprudent speculation which has really wasted the country's wealth. No financial ingenuity can altogether avert the consequences. To sustain the solvency of traders who have thus betrayed the economic interests of their country is like keeping an incompetent general in his command. But the difficulty may be due not so much to imprudence as to the poverty or elementary economic organisation of the country. It may be that traders have no good securities to pledge, not because they have been tying up their capital in wild speculations, but because they are not rich enough to take money out of their business in quiet times for the purpose of building up a reserve. In such cases the central bank or the Government may make advances on the security of the produce of the country, or the Government may even buy up the produce at a fixed low price, sufficient to rescue the holders from extreme embarrassment, but not so high as to risk involving the Government in heavy loss. A purchase operation, however, is dangerous. Loans can be made at high rates of interest, which will lead the borrowers to repay them at the earliest opportunity. Purchases leave the vendors with money to spend, whether they are debtors or not.

In the case where the credit expansion is too great to be counteracted by the effects of the crisis, the central bank will find that the demand for gold for export continues. It cannot go on granting advances freely without endangering its gold reserves, and it may be that no raising of the rate of interest will be sufficient to defend the reserve. It is faced with the choice between a refusal to lend and a suspension of gold payments. To refuse a loan is to compel a sale, and every sale tends to depress prices in what is already a panic market. A refusal to lend cannot but mean more bankruptcies. The very purpose of it is to raise the value of the monetary unit still higher, to make the burden of indebtedness still greater, or, in the more familiar language of the balance sheet, to depreciate the value of assets still further. The suspension of gold payments may well be the lesser evil.

And, it may be asked, what is there so very terrible about a suspension of gold payments ? A complete abandonment of the generally recognised standard of value of the commercial world would obviously be in itself undesirable, but presumably it need only be a temporary measure. A contraction of credit, milder and more prolonged than that which would precipitate a crisis, might restore the standard after a year or two. Traders would rather suffer the inconvenience and uncertainty of variable foreign exchanges for a time than face the ordeal of a restriction of credit drastic enough to restore the standard immediately. For many countries this is true, and they do in fact take refuge from the stress of a crisis in a more or less prolonged régime of inconvertible paper. But the desirability of suspending gold payments depends on circumstances, and for some countries it has grave disadvantages. This is especially so for one which takes a large part in financing international trade.

The business of a financial centre includes two functions, accepting and discounting. The accepting business constitutes the centre an international clearing-house ; that is to say, international obligations are settled in its currency. The discounting business constitutes it an international money-lender. It is the former class of business that specially depends upon confidence in the solvency of the financiers and the soundness of the currency at the centre. The discounting business depends rather on the sufficiency of its resources, whether these resources consist of permanently invested capital or of bank deposits. But the bank deposits themselves will be partly composed of the credit balances of international traders who are accustomed to settle at the financial centre, and these credit balances would be withdrawn if the centre ceased to be a convenient place of settlement.

It was explained in Chapter VIII. that when the whole of the foreign trade between two countries is financed by bills upon one of them, the assets of the exchange banks which do business between them will be composed predominantly of bills on this one, and that, in the event of a monetary stringency in the other, it is essential that they should be able to convert their assets in the former into gold which can be packed up and sent away to discharge their liabilities in the latter. If at the critical moment they cannot get the gold, the system breaks down, and caution impels the exchange banks to diminish their holdings of bills on the financial centre. The extent to which they can do this will depend on there being suitable acceptors to be found in other places. If there are, and if a preference is given to bills drawn upon them, as being payable in a more trustworthy currency, traders will tend to desert the old centre. Probably this cannot be done in a hurry. The accepting business depends not only on the solvency and reputation of the acceptor but on the acceptor's knowledge of his client's affairs. Indeed, the first condition is really bound up with the second, for the acceptor's solvency depends on the solvency of those for whom he pledges his credit. The business connection of a great accepting centre cannot be displaced in a day. Nor can the discounting business be easily transferred. It represents a huge investment of capital. The traders financed by it are dependent upon this capital, and, even if they do draw on a different centre, they will probably have to have recourse to the same discounters, who, like the acceptors, know their affairs. If new discounters appear at other centres, credit will be extended at the new centres and contracted at the old, so that the exchanges will turn in favour of the latter ; and this tendency would be only partly offset by the transference of traders' balances.

The only easy and rapid way by which the transference of business can be effected is by the substitution of bills on the new centres for bills on the old in the assets of the exchange banks. In this process there is no movement of capital at all. The same trader borrows from the same bank as before ; only the debt is repayable at a different place and in a different currency.

The upshot is that a loss of confidence in the stability of the currency may drive away some of the business of a financial centre almost immediately, and may gradually undermine its position altogether. The process will be delayed, however, and may be largely prevented by the business connection of the accepting and discounting houses, and by the good credit of the former and the large investment of capital in the latter. But business goodwill is vulnerable, and no country has a monopoly of investible capital. And, moreover, the financial houses themselves may migrate. Once the world's confidence in the currency of a financial centre is forfeited, its tenure becomes very precarious. Thus the almost superstitious loyalty of the London money market to the gold standard may be right and wise, and yet the comparative indifference to the maintenance of gold payments in some foreign countries, which have never played the part of financial centres, is not necessarily the reverse.

When it comes to coping with an external crisis, the same choice presents itself between a fall in values, which may be disastrous, and a suspension of gold payments, which means, temporarily at any rate, a departure from the gold standard. But in this case there is a chance of avoiding a crisis altogether. If a premium is charged on gold, the extent of the contraction of credit lies entirely within the discretion of the central bank. It might make no contraction at all, and might charge so high a premium on gold that practically none would be withdrawn.

But this would be to put the premium on gold, and consequently the premium on foreign exchange, at a maximum. It would be more judicious to take a middle course, contracting credit gradually and letting a certain amount of gold go. It is sometimes contended that a small premium on gold—say, 1 per cent.—is an adequate substitute for a large increase in the Bank rate. This view is based on the assumption that the high Bank rate only brings in gold by attracting the foreign lender. The direct return to the foreign lender can indeed be counteracted by a moderate premium. But the really important consequences of the high Bank rate are to be found in the pressure put upon merchants to sell, and in the contraction of credit and consequent depression of prices, and these may be the equivalent of a large premium, perhaps 10 per cent. or more.

However, even a small premium helps to avoid the extreme severity of the contraction of credit that would otherwise be necessary. It shelters traders from the full force of the storm of forced sales and tumbling prices which rages outside, though of course, this benefit does not extend to those who owe sums in foreign countries. These latter must pay the premium on gold or on foreign exchange in order to discharge their debts.

If there is to be no gold premium, an external crisis necessitates an export of gold and a contraction of credit. The less the contraction of credit, the greater will be the export of gold. If more gold is asked for than can be spared, the contraction of credit must be intensified, and if it is too abrupt there will be a crisis. The multitude of alternatives and the variety of circumstances defy any attempt to formulate general rules. One thing, however, we may safely say. International co-operation will conduce to the better control of crises. The occurrence of a crisis in one country is a danger to all the others. All are interested to prevent it, and, once it has broken out, all are interested to keep its effects within bounds. Their mutual help may take several forms. The gold movements may be regulated so as to distribute the demand as equally as possible among the countries which have gold to spare. The

Bank of France has never been obliged unconditionally to redeem its notes in gold (having always the option to pay in silver), but it has from time to time sent large sums to London or New York to meet the demands of a crisis. In 1890 the threatened failure of Messrs. Baring Bros. filled London with consternation. The failure was staved off by a joint guarantee on the part of the London banks, and the resources of the money market were temporarily strengthened by the importation of £3,000,000 in gold from Paris. In 1907 gold was sent from a score of countries through London to New York. In 1839 England, as the sequel of the Continental crisis of 1838, was losing gold. A credit of £2,000,000 was created by the Paris bankers upon which the Bank of England could draw, and bills drawn on this credit took the place of gold. A credit of £900,000 was opened for the same purpose at Hamburg.

A crisis produces a sudden inequality of price level (virtual, if not actual) between the centre of crisis and the rest of the world. To restore equilibrium, the one level must be raised and the other must be lowered. If credit has been unduly expanded, prices cannot remain permanently at the higher level, but it is to the interest of everybody that the general fall of prices should be as moderate and gradual as possible. For the moment, at any rate, they will wish by every available means to raise prices at the crisis centre. The sending of gold helps to do this, since it increases the stock of purchasing power. Gold is sent because it is the means of acquiring credits, but unless the influx of gold is accompanied by an extension of other banking assets, such as advances and discounts, the additional purchasing power will be limited to the bare equivalent of the gold itself. Now one of the chief difficulties in a crisis is to find solvent borrowers. In ordinary times the loans and discounts granted by the banks are limited only by the need for maintaining a due proportion between cash reserves and the other items of the balance sheet. At a time of crisis a different limit comes into operation. The central bank, perhaps, is willing to issue unlimited quantities of cash in the form of legal tender paper, and the other banks are prepared to make advances in due proportion to these fresh supplies of paper if only they can find suitable borrowers. But those who want to borrow are unable to offer good security, and, if they had to disclose their financial position on the basis of panic prices, would probably show a deficit. Lending being impossible, bank credits cannot be created, and paper money cannot be put into circulation. The shortage of purchasing power cannot be relieved except by sales of goods and securities on the part of the embarrassed traders. Hence the forced sales and the influx of gold.

The influx of gold is not due, as is sometimes maintained, to a distrust of any other medium of payment. A debtor can discharge his debt in legal tender paper money whether it be distrusted or no, and cheques are usually quite freely accepted in the midst of a crisis, except when drawn on a bank which is believed to be in difficulties. Gold is imported because the interruption of credit operations has stopped the supply of paper money and bank credits. It is therefore the only means of increasing the supply of purchasing power and so of reducing again the artificially raised value of the monetary unit, and other countries ought, in the interests of the commercial world, to send whatever gold they can to the crisis centre. When the storm is over, and traders have either weathered it or foundered, lending can recommence on the normal footing, the supply of credit money will be reconstituted, and the greater part of the gold will soon be sent abroad again.

Before leaving the subject of crises, it will be worth while to consider the position at a time of crisis of a country with a gold exchange standard, or with a currency system based in part on foreign bills or assets abroad. In case of an external crisis there will be a sudden rush to remit money to the crisis centre. But this demand for remittances will be met by the sale of bills on foreign centres, and the demand for gold will be diverted thereby to those centres. It is plausibly contended that countries which adopt a gold exchange standard owe it to their neighbours to keep a part at any rate of their foreign assets in the form of actual gold "earmarked." When the crisis comes and the foreign assets are drawn on, this earmarked gold can be unpacked from the vaults where it is kept, and paid away, thus adding to the world's stock of gold in a way that payment from a bank credit does not. But, of course, in so far as gold is substituted for bills or securities, one of the great advantages of the exchange standard is lost, since the gold yields no interest. It may be more convenient to have the gold in a great financial centre, where it can be used at a moment's notice to regulate the exchanges, than in a country where it is not used for internal circulation, and where it can serve no purpose except by being exported. Even the Bank of England discovered during the war that it might just as well keep a part of its gold reserve abroad. But this is not an application of the exchange standard. Countries which have an exchange standard, or which base their currency systems in part on assets held abroad, if they have gold reserves at all, usually prefer to keep their gold at home.

Where all or part of the gold is replaced by foreign assets it need by no means be admitted that there is any real failure of duty to the gold-using world. It is quite true that a country with a currency so organised has no gold to offer to a neighbour distressed by a crisis. But it is equally true that when it in turn suffers from an internal crisis, it will ask for no gold from abroad. When its traders acquire credits abroad by means of forced sales of goods and securities, the central bank or other currency authority will purchase these credits with new issues of paper money. The traders in question, those whose credit is tainted and whose embarrassments are the cause of the crisis, will thus be easily and quickly supplied with the price of whatever they have to sell in their own legal tender money, and will not have to import any gold at all. I cannot quote any concrete case where this method of dealing with a crisis has been actually pursued.[1] The gold exchange standard is of recent adoption, and the countries in which it has been given its completest form have not suffered from internal crises of the normal type since it came into being. But the logical consequences of the system are clear enough, and it is quite fair to claim that it enables the country which adopts it to dispense with imports of gold in a crisis, as at all other times. In fact, the country with an exchange standard can stand aside from the world's gold market altogether, adjusting its currency not to a gold standard as such, but to the standard which its neighbours use and which happens for the time being to be based on gold.

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[1] During the American crisis of 1873 the Secretary of the United States Treasury was urged to use his surplus funds to buy exchange on Europe, but he declined to do so. The credits opened in Paris and Hamburg in favour of the Bank of England in 1839 are somewhat similar in principle.

A crisis is not a necessary or universal accompaniment of a credit contraction. Nearly every world-wide credit contraction produces a crisis somewhere, but there are not usually more than two or three separate centres of crisis and sometimes not more than one. There is no reason in the nature of things why the process of contraction should not be completed without a crisis breaking out anywhere.

CHAPTER XII.

MONEY AND COINAGE.

Up to this point our attention has been turned to those problems which proceed from the inherent nature of a credit system. We have found that there are disorders which threaten the stability of such a system from within, even though it be assailed by no disturbances from without. In Chapter XIV. we shall pass to the consideration of these extraneous disturbances, especially of those attributable to war, and we shall find that they play a very large part in our subject.

In the present chapter we shall draw some general conclusions as to the nature of money, and as a preliminary a short recapitulation will be convenient.

At the outset we adopted a purely artificial hypothesis, the existence of an economic community which used credit as a means of payment, but had no money. We assumed that there might be a " money of account " for the measurement of debts and therefore of prices, and we found that, apart from the obvious disadvantage of having no single legal medium for the discharge of debts, the chief defect of a credit system carried on without money was its instability. Credit, we showed, has an inherent tendency either to expand or to contract indefinitely, but especially to expand, and in doing so to alter the unit of value beyond any assignable limit. The use of money supplies the means of discharging debts, but it also plays the very important part of stabilising the unit of value.

In Chapter II. we passed to the theory of a credit system based on metallic money. Metallic money, under a free coinage system, provides an independent standard of value. But the supply of money cannot be arbitrarily increased. The danger of an indefinite depreciation of the unit of value is replaced by that of a denudation of the reserves of money. Owing to the activity of trade during a credit expansion and the accumulation of unexecuted orders, which will require to be financed when they are undertaken, there arise *latent* demands for credit of which the banks have no cognisance. At the same time the effect of the credit already created, in occasioning a drain of money into circulation, is gradual, and a relatively long interval must elapse before its full extent is felt. There are therefore latent demands for cash as well as latent demands for credit, and both will cause embarrassment to the banks when they mature.

This led us naturally to the currency system in which the supply of money can be increased or diminished at discretion ; in other words, to paper money. Paper money has no intrinsic value, and the first problem was to seek the law by which its value is determined. This we found in the quantity theory. The quantity of purchasing power or command of wealth held by people in reserve is determined by their economic circumstances. The aggregate of these reserves of purchasing power at any time is equal to the unspent margin or aggregate of bank credits and money in the hands of the people at that time. The former is an aggregate of command of *wealth*, the latter is an aggregate of *monetary units*, and their equality determines the value of the monetary unit in wealth, or the prices of the various forms of wealth in monetary units. The quantity theory so enunciated merely states the relation between the number of the monetary units in circulation and the value of the unit, when all other economic circumstances are supposed given ; in itself it says nothing as to what happens when the number of units in circulation is changing, and if such a change is in progress the existence of a state of change must be included among the economic data assumed.

A change in the unspent margin is effected by means of a change in the amount of credit created by the banks. Money is not borrowed to be held idle, but is paid away as fast as it is borrowed to meet the expenses of production, that is to say, the incomes of those who are engaged in production. An increase or decrease in the amount of credit created per unit of time means an approximately equal increase or decrease in the consumers' income, and so in the consumers' outlay. The consumers' outlay constitutes the effective demand for commodities and services, and upon it, therefore, depends the level of prices. Thus an acceleration or retardation in the creation of credit causes a rise or fall in prices, or in other words, a fall or rise in the wealth value of the monetary unit, quite apart from any change in the unspent margin which may accompany or follow it. In fact, the greater the effect on balances the less, in the first instance, will be the effect on the consumers' outlay and so on prices. That part of the credit created which, on passing into the hands of the people, is spent, affects prices, while for the time being that which is left in balances does not.

The banks undertake to transform credit into money and money into credit at the will of their customers. Consequently with a given supply of credit the circulation of money is determined by the convenience of the people ; it can only be controlled through the control of credit, by which their business and their incomes can be affected. The problem of the regulation of currency is therefore resolved into that of the regulation of credit.

Before dealing with the systems by which paper currencies are regulated through credit, we found it necessary to discuss the foreign exchanges. An undue expansion of credit in comparison with credit in foreign countries makes the exchanges unfavourable and causes an efflux of gold ; an undue contraction makes them favourable and causes an influx of gold. These effects being felt in the first stages of the credit movement give an earlier warning than the internal drain of money into circulation.

By basing the control of credit on the foreign exchanges, credit movements cannot be avoided altogether, but can be kept in harmony with credit movements abroad. But this system does not prevent world-wide credit movements. And the same dangers that were disclosed in Chapter II.—that is to say, the growth of latent demands for credit and cash—will arise in the case of world-wide expansions. The form which the demand for cash takes depends on the currency system of each country. In some it can only be met, in whole or in part, by gold ; in others it can be met by paper money, which according to law must be wholly or partly covered by gold. As the demand for cash grows, the surplus reserves of gold are gradually used up, till at last they reach the point at which in one or more countries there is no longer any certainty that the legal limit on the note issue can be observed, or perhaps even that the convertibility of the notes into gold can be maintained. There follows a contraction of credit in these countries, which inevitably spreads to the others. But the drain of cash, the consequence of the previous credit expansion, continues, and the latent demands for credit, arising out of past commitments and unexecuted orders, continue to press upon the banks for further accommodation. In those countries where the pressure is greatest, and the measures taken to contract credit correspondingly violent, there may ensue a financial crisis.

A financial crisis, the consequence of a general depreciation of values, and of the embarrassment of people who are carrying the depreciated commodities and securities with borrowed money, is important in two ways. First, in the centre of crisis itself it is the penalty of an imprudent use of credit, and it demands special measures to save solvent traders from suffering failure through the disorganisation of credit and the panic fall in values. Secondly, the occurrence of the crisis subjects other countries to an extreme strain through the sudden and violent movement of the exchanges in favour of the crisis centre.

In the management of a currency system the danger point is always to be found somewhere in the progress of the credit contraction. The risk of an indefinite depreciation of the monetary unit, such as would occur in a system of credit unsupported by money, is guarded against so long as the paper money is convertible into gold or kept in touch with a gold standard. But a condition of the preservation of a gold standard is that a credit expansion must sooner or later be followed by a credit contraction. Too abrupt a credit contraction produces a crisis, yet if the demand for legal tender money persists, either the contraction must be abrupt or the prescribed limits on the issue of paper money must be exceeded. And if these limits are exceeded the process may go further, the gold reserves may be exhausted and gold payments may have to be suspended. It may therefore be that a crisis is the only alternative to a temporary abandonment of the gold standard. The prudent country will look forward to this danger, and will endeavour to restrain its share in the general credit expansion. Caution during the expansion period will of itself lead to the accumulation of gold resources, and these gold resources can be used should a crisis occur in any other country during the inevitable credit contraction. For some disparity between the level of values in two countries can be maintained on condition that that with the higher scale of values is able to continue exporting gold to that with the lower, so that a country which has gold to spare can defend itself for a time against the violent fall of values which a crisis involves.

Hitherto we have assumed the standard of value to be gold.

The problem of stabilising the monetary unit, on which the value of debts depends, can be solved by defining the unit in terms of a commodity, such as gold or silver. But that is not necessarily the only solution. Nor is it a perfect solution. We have shown that in spite of its union with gold the monetary unit will vary, and the world value of gold will vary with it. The industrial demand for gold is a mere trifle compared to the vast stock used throughout the world as currency.

In the event of a credit expansion, the increase in the quantity of purchasing power lowers the value of the monetary unit. The monetary unit is a gold unit, and therefore gold is cheapened, but this is not due to any diminution in the demand for purposes of currency. With a specie standard there is an *increased* demand for gold; the demand for gold is derivative from the supply of credit, and when credit expands a greater amount of gold passes into circulation. The banks, in fact, are under an obligation to supply gold at a fixed price. The fall in the value of the monetary unit makes this price, though in appearance fixed, in reality lower. A lowering of the price of gold means an increased demand, though, as we have seen, the increased demand for currency purposes only makes itself felt very gradually. In order to equalise supply and demand, the supply has to be supplemented from the reserves of the banks, or else replaced in part by an increase in the paper circulation.

It is sometimes maintained not merely that gold is a commodity, but that *money* is a commodity. In virtue of the quantity theory, the greater the supply of money the less will be its value in other commodities ; what is this, it is asked, but the law of supply and demand ? The money in circulation represents in the aggregate the amount of purchasing power that people choose to keep in hand in the form of legal tender. They keep it in this form for certain definite purposes ; that is to say, on account of its utility. The rich man keeps his pocket-money, the poor man keeps his stock of cash, the shopkeeper keeps his till money, the banker keeps his reserves. Each is sacrificing the advantages of spending or investing this purchasing power for the convenience of having ready money in hand. This demand for ready money is analogous to the demand for a commodity ; cash in hand is part of the capital resources of the individual.

But it is a mistake to push this analogy too far. Indeed, when applied to paper money it is palpably no more than an analogy. Even though paper money behaves like a commodity in following the law of supply and demand, it obviously differs from other commodities in having no appreciable cost of production. It resembles other entitling documents, rather than commodities. A theatre ticket derives its value from the right which it confers to a seat in the theatre ; a legal tender note derives its value from the right which it confers of discharging a debt. Just as the value of theatre tickets is derived from the value of theatrical performances, so the value of paper money is derived from the value of debts.

We have seen how the value of the monetary unit is determined by the quantity of credits (debts) put into circulation by the banks, and how the demand for legal tender money arises from the unsuitability of bank credits as a medium of payment in certain classes of transactions. The interchangeability of bank-credits and legal tender money at the option of the banks' creditors makes the separation of the total stock of purchasing power into credit and money an artificial one. More properly, the quantity theory expresses a relation between the total command of wealth held by people in reserve and the number of units of purchasing power, credit and money together, by which that command of wealth is expressed. It is not money but purchasing power in general that must be the " commodity."

Professor Cannan would compare currency not to consumable commodities, but to durable commodities, such as houses, which are used by being occupied.[1] If the demand for houses or for currency increases, people will offer more of other forms of wealth in exchange for a given amount of house room or for a given number of currency units, and will also offer more for the *hire* of houses or of currency units. Equilibrium will be achieved in the market for houses because the offer of increased price and increased rent will elicit an increased supply.

But what happens in the case of currency ? The " supply " is the unspent margin, which can only be increased by increased borrowing from the banks. But a rise in the wealth value of the unit will diminish the amount of borrowing from the banks. An increased " rent " for the hire of currency, that is to say, an increased rate of interest, may check demand but cannot increase supply. Indeed, supply merely reflects demand ; whatever checks or stimulates the demand for currency checks or stimulates the supply of currency. This fundamental divergence from the analogy with a commodity is at the bottom of the inherent instability of credit.

The greater the number of monetary units in the unspent margin, the less, says the quantity theory, will be the wealth value of the unit. But equally, the quantity theory says, the less the wealth value of the unit, the greater the number of units in the spent margin. In exactly the same degree in which an enlargement of supply lowers value, a fall of value stimulates supply.

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[1] *Money*, pp. 71-3 (5th edition).

Nor do people really pay interest for hiring currency in the same sense as they pay rent for hiring a house. A house is hired to be occupied; money is borrowed not to be held but to be paid away. A borrower may be regarded as paying interest for his working capital, of which his cash balance is a small and fluctuating part. A high rate of interest impels him possibly to some extent to economise his cash balances, but still more to throw products on the market out of his stocks. The supply of disposable products is thus increased in much the same way as the supply of disposable houses might be increased by a rise in rents. But the supply of currency is *diminished* and the value of the currency unit is raised.

The theory that money behaves like a commodity has the attractiveness of a paradox which completes a generalisation. But it melts away under analysis except as applied to metallic money. Gold is undeniably a commodity. But gold itself, so long as it is being used as money, is subject to all the laws which govern the value of money. A gold coin is itself a ticket; its character of legal tender is derived not merely from the material of which it is made, but from the fact that it has been through the Government mint, and has been issued for the express purpose of being the means of discharging debts. It is stamped on gold in preference to being printed on water-marked paper, because this arrangement facilitates the maintenance of a standard of value.

So long as the ticket for discharging debts can be transformed at a negligible cost into the raw material of industry, the unit represented by that ticket cannot depreciate below the value of the material which it contains. But for all that, so long as the coin is *not* melted, it remains a ticket. Its quality of discharging a debt is attached to it conventionally, whether by law or custom, just as is the quality of admitting to a performance to the theatre ticket.

And though the metal of which the coin is composed is a commodity, it is only under a system of free coinage that the value of the commodity regulates the value of the coin. It is true that the value of the coin cannot fall much *below* the value of the metal, since it is almost impossible to enforce any prohibition of melting.[1] But the value of the coin may be raised indefinitely *above* the value of the metal by merely restricting the amount coined ; for by the quantity theory the fewer the coins in circulation the greater their value. This is what has actually been put in practice in those countries, like India, which have a silver coinage with a fixed gold value. The rupee is a mere ticket or token. The same is true indeed of all silver coins in gold-standard countries, whether they are unlimited legal tender like the American standard dollar, or limited like the subsidiary silver which is used as small change.

In the case of inconvertible paper money it is easy to see that its value arises from its power of discharging debts. Debts have value. As the purchase of commodities and services creates a debt, and one debt can be exchanged or set off against another, the ownership of a debt confers on the creditor that command over commodities in general which we call purchasing power. The possessor of any quantity, large or small, of wealth, prefers to retain a portion of it in an *undifferentiated* form, an option which he can exercise as he pleases when circumstances show which particular kind of wealth will meet his needs. Hence there is a demand for credit or purchasing power *as such*, which is satisfied by the existence of the unspent margin. By this demand the value of debts is determined, and the value of paper money is derived from its interchangeability with debts. Paper money can receive its value from no other source.

But, though less obvious, it is equally true that *gold itself* derives much of its value from its convertibility into credit. Not only does the mint give a piece of gold the same legal tender property as belongs to paper money, but a great part of the demand for uncoined gold bullion proceeds from its use as a symbol of purchasing power. Because gold can everywhere be transformed into credit, it is stacked to the value of scores or hundreds of millions of pounds in the vaults of each of the great central banks of the world. How great a part is played in the market for the precious metals by the currency demand is clearly illustrated by the effect on the value of silver of its gradual demonetisation after 1871, as well as by the fall which occurred in the world value of gold in comparison with other commodities, when so much of the metal was displaced by paper-money during the war.

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[1] The prohibition of melting in England during the war was made effective because there was no gold coin in *circulation*. The Bank of England refused to pay out gold coin to anyone who was suspected of the intention of melting it.

In short, gold is a standard only a degree less artificial than paper money, and artificial for the same reason—that its value is in part a consequence of its legal or conventional characteristic of discharging debts. But it differs from paper in two respects, in that it has *some* value otherwise than as currency, and that its value as currency is recognised in the world market without regard to national frontiers.

Up to this point we have hardly touched on the problems of *coinage*, as distinct from those of money. If the favour now shown to gold bullion standards and gold exchange standards becomes permanent, these problems will soon have only an historical interest. Under the system of free coinage the power of legally discharging a debt belongs not to gold in itself, but to gold *coin*. Credits and legal tender notes are alike payable in coin, and the maintenance of the standard depends, or may depend, on the perfection of the coin. As soon as the monetary unit begins to depreciate below the gold value of the coin, it becomes profitable to melt or export the coin in circulation, and to convert credit and paper into coin for these purposes. If the coin is perfect and of full weight, it behaves exactly as if it were so much bullion. The problems begin when some of the coins are, from wear, "clipping," inaccurate manufacture, or deliberate debasement, below the prescribed standard of weight and fineness. In that case it is profitable to melt or export those coins the metallic value of which is greater than their current value in terms of the monetary unit, but not those whose metallic value is less.

This is Gresham's law. The worse money drives out the better. It takes effect only when there is a discrepancy between the value of the coin as a commodity and its value as a ticket or token. Its value as a token is fixed by the quantity theory. With changes in the state of trade this value may change. If the coin is perfect, then, when the monetary unit tends to become depreciated, the coin begins to be melted and exported, and this process cannot stop until either the value of the monetary unit is restored (by a contraction of credit or any other means) or the entire stock of currency is exhausted. If some of the coins are imperfect, the better coins will be melted or exported, until none are left of which the metal contents are worth more than their value as monetary units. In the former case the monetary unit will be saved from depreciation so long as there is any coin to be sent away; in the latter it will be depreciated to the level of the least imperfect coins left in circulation.

When, under a system of bimetallism, as it is called, the coinage consists of two different metals, gold and silver, both of which are coined freely from any bullion brought to the mint by the public, the same principle is found to work. For the purposes of coinage the monetary unit must represent a definite quantity of either metal. The consequence is that the mint practically undertakes to buy gold and silver in unlimited quantities, and to pay for them at fixed prices in the money of account. This presupposes that the relative values of gold and silver will correspond with their relative mint prices. For example, in France under the bimetallic régime from 1803 to 1873 a kilogramme of silver, nine-tenths fine, was coined into 200 francs, and a kilogramme of gold of the same fineness was coined into 3100 francs. Consequently, the mint prices were in the proportion of 3100 to 200, or 15½ to 1. But if there is an increase in the supply of one of the metals in comparison with the other, so that, but for the bimetallic system of coinage, the more plentiful would tend to be cheapened, the effect is that an increased quantity of the more plentiful metal is brought to be coined. The increase in the circulating medium causes, in accordance with the quantity theory, a depreciation of the monetary unit and a general rise of prices. This general rise of prices would, but for the bimetallic system, affect the less plentiful metal as much as other commodities, but as soon as the price of this metal as bullion rises appreciably above its price as coin the coins begin to be melted down or exported. The mint price over-values the more plentiful metal and under-values the other, and the under-valued metal is driven out of circulation in exactly the same way as good coins are driven out by those which are worn or debased. This is what happened in France and the other bimetallist countries of Europe in the nineteenth century. After the gold discoveries of 1849 and 1850 gold began to be over-plentiful and to displace silver from circulation, until at last there was such a dearth of small change that it became necessary to coin a limited supply of subsidiary coins of inferior fineness, which it would not be profitable to melt or to export. Hardly was this reform made, when the supply of silver in turn became unduly plentiful and the supply of gold insufficient. In 1873 the free coinage of silver had to be suspended, and bimetallism was at an end.

The concurrent use of coin and paper money affords another illustration. So long as any appreciable amount of coin remains in circulation, coin and paper, being equally available for the payment of debts, bear the same value in terms of the money of account. But if the amount of paper money is increased, the value of the monetary unit falls, and the coin, as a token, becomes under-valued in comparison with the market value of the metal it contains. Coins are then melted or exported (or hoarded in the hope of a further rise in their value) until the value of the monetary unit is sufficiently raised to counteract this tendency. Thus here, too, in the end the additional paper money, after a certain amount of adjustment, will have driven an equivalent amount of metallic money out of circulation.

But though there have been countless instances of the operation of Gresham's law all over the world, it must not be supposed that this law is true without exception or qualification. It can only operate so long as the nominal value of the coins or notes in circulation is generally accepted ; that is to say, so long as they are actually used to discharge debts on the basis of that nominal value. If a debtor holds some coins which are, and others which are not, worth more as metal than as money, his creditor cannot compel him to pay the former. The debtor may stipulate that the more valuable coins be accepted at something above their nominal value. Usually the inconvenience of making payments in a medium the money value of which varies with the market prevents this, but that is not invariably the case. In England in the latter part of the seventeenth century the gold coin issued from the mint was the guinea, which was intended to be worth twenty shillings of silver. This represented an under-valuation of gold as compared with its market-price in England and abroad, and according to Gresham's law the guinea ought to have been driven out of circulation. But at that period the growing volume of trade made so bulky a medium of payment as silver intolerably inconvenient. The merchants and goldsmiths or bankers found gold indispensable for large payments. Instead of the twenty shilling guinea being driven out of circulation its nominal value became a dead letter, and it regularly passed for 21s. 6d. or 22s.

This customary over-valuation of a coin which happens to be convenient for commerce, notwithstanding that legally it is under-valued, is not the only possible exception to Gresham's law. Money, whether coin or paper, which is legal tender may cease to pass at its face value, because in practice debtors do not wish or do not dare to take advantage of their legal right to pay with it. The French assignats, which were still the sole medium of payment when they circulated at from one-fifth to two-fifths of their nominal metallic value in 1794, fell to one-three-hundredth in 1796. It can hardly be supposed that in the latter year a debtor who valued his credit or his reputation for honesty would have tendered a bundle of notes to the value in the market of ten sous in payment of a debt of 150 livres.[1]

Under the régime of the silver standard there was no difficulty about the supply of subsidiary coinage ; the small silver coins represented as small a unit of value as was ordinarily required for anything above the trifling transactions for which copper tokens were employed. Gold coins, however, are not usually issued below about fifty grains (the weight, for example, of a ten-franc piece), and coins of twenty-five grains are about as small as can be conveniently handled. It was found that if gold and silver coins circulated concurrently, and if the silver became under-valued, inconvenience was caused by the disappearance of the silver, because there was then a shortage of small change. In the eighteenth century in England this difficulty solved itself, for though all the best silver coins were exported or melted, those that remained eventually became so worn that it was not in any circumstances profitable to export them. For a century and more the same old coins, eventually so worn as to be nothing but plain metal discs, were the only subsidiary coins we had.[2] At last the Coinage Act of 1816, which definitely disestablished silver as a standard, making silver coins legal tender only for sums not exceeding 40s., introduced the system of subsidiary coins expressly designed to contain less fine silver than, at the prevalent ratio of silver to gold, was equivalent to their nominal value. The use of an over-valued silver subsidiary coinage has now become almost universal.[3]

The system is, of course, incompatible with the free coinage of silver. The amount coined must be kept within the control of the Government. And the Government must regulate the amount coined according to the public demand. People will draw out from the banks just so much silver as they need and no more. If there is not enough to meet their needs, the banks will feel the scarcity, and it is on the banks that the Government must rely to notify them of the demand. When the banks ask for more subsidiary coin, the Government buys so much silver bullion as is required, at the market price, coins it, and sells it to the banks at its face value. If it issues more than is required, the surplus will soon accumulate at the banks, and they will ask for less. If, nevertheless, the Government persists in forcing more and more silver into circulation, till the banks find that they have inconveniently large accumulations, the banks will eventually make a charge to every one who deposits silver ; in other words, the silver coinage will be at a discount. Indeed, it may be advisable for the Government to guard against this by undertaking to buy back any redundant silver at its face value.

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[1] Legal recognition of this situation was given by the Acts scaling down the debts contracted during the depreciation (see pp. 315-16).

[2] They were supplemented during the Bank Restriction by Spanish dollars, which were stamped by the Bank of England and issued to pass at a prescribed value.

[3] Its abandonment in countries with heavily-depreciated paper money may be regarded as temporary. The use of notes for very small values is inconvenient.

Fundamentally, the issue of the standard money of full legal tender, whether it be metal or paper, is regulated in the same way as the issue of subsidiary silver. The customers of the banks are free to transform as much as they please of their credits into money. The banks determine their demands on the central bank for legal tender in accordance with the demands of their customers. The central bank issues paper, or pays out gold, as the case may be, in response to the demands of the banks. To control the demand for money, it is necessary to influence the individual from whom the demand ultimately proceeds. His need for money is incidental to his dealings in credit ; he only needs it because money happens to be a more convenient medium for some of the transactions for which he has obtained advances of credit. That is why the control of money can only be effected through the control of credit.

From the point of view of the individual the demand for gold, silver, paper, or credit is determined simply by convenience. Up to a certain point the banks can manipulate the demand, by insisting on their right to pay their debts in whatever legal medium they choose, but if they run too far counter to the convenience or the prejudices of their customers, the medium of payment most in demand will go to a premium. The high market valuation of the guinea in England in the seventeenth century was one example of this. Another is to be found in the premium on bank money at Amsterdam and Hamburg in the seventeenth and eighteenth centuries; for at the great centres of international trade a miscellaneous assortment of coins of many nationalities and varying values would accumulate, dealings in which were intolerably troublesome in comparison with the simple and business-like transfers that could be made in the books of the banks. Yet another instance is to be found in the premium which often prevails on bank notes at the Treaty Ports of China, though these notes have no legal tender character, and represent no value other than that of the silver into which they can be converted on demand at the issuing bank. But the inconvenience of silver for large payments is almost prohibitive, and the preference of traders for the notes is reflected in the value at which they pass.

Gold displaced silver as the standard of value by reason of its greater convenience. Under the free coinage system the legal tender money which people carry in their pockets is made of coined metal. In the Middle Ages, when the world was poorer in material wealth and the purchasing power of silver was much greater than it now is, the largest coin in use in England was at one time the silver penny of 22½ grains (about the size of the modern three-penny piece). When the scale of business transactions was such that that was the convenient coin, people were not likely to find the silver that their business required them to handle unduly bulky.

Gold was used in the Byzantine Empire, and spread from there to the Italian cities which grew rich by trading with the Levant. Florence had her florins and Venice her ducats. But in Western Europe gold was, and long remained, a merchants' medium. Till the discovery of the New World it was too scarce and valuable to be a suitable medium for general use; thereafter, the supply of both metals being increased, silver became too plentiful and cheap. It dropped out of use in England in the eighteenth century and in the United States in the nineteenth, the result in both cases of an over-valuation of gold in a nominally bimetallic system.

Bimetallism was for a period really operative in France. France was prepared either to absorb gold and release silver, or to absorb silver and release gold at her mint prices, corresponding to the ratio of 15½ to one. So long as the supply of either metal did not become so great as to displace the other completely from circulation, the French ratio dominated the world bullion markets, though there was regularly a small premium (rarely exceeding 1 per cent.) on the scarcer metal. Throughout the first half of the nineteenth century, gold was the scarcer and stood at a premium, and French currency was on a silver basis.

After the gold discoveries of 1849 and 1850 silver became the scarcer metal, and French currency passed on to a gold basis. The premium on silver, small though it was, was an element of uncertainty in the exchange value of a silver currency on both London and Paris, the two great financial centres of the world. In 1871 Germany changed over from a silver to a gold standard, and thereupon almost all the rest of the world endeavoured to follow suit. The process was spread over thirty years, and even at the outbreak of war in 1914 remained incomplete, since China, with one-fifth of the world's population, retained (and retains) the silver standard.

So long as the lowest denomination of paper money was too high for the payment of wages, the superior convenience of gold was a reality. In England, with no notes below £5, a coinage of silver without gold would have been intolerably clumsy. In France with no notes below 50 francs, it would still have been inconvenient. Germany started the use of 20-mark bank notes in 1906,[1] but they had not come into common use before 1914.

Other countries, however, had long used small notes, and, once small notes were available, the advantages of gold over silver practically vanished. For any denomination above the subsidiary coin, paper money was, on the whole, as convenient as gold, and it was less expensive to maintain. Since the war gold coin has practically ceased to circulate in Europe and America, but the gold standard is firmly entrenched in monetary legislation, in the habits and prejudices of the public, and in the accumulated gold reserves of central banks and other currency authorities.

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[1] Treasury notes of small denomination were already in existence, but the issue was limited to M. 120,000,000.

Even if paper money has displaced gold coin from internal circulation, there is still a slight advantage of gold over silver as an international standard, in that the cost of transporting a given value from country to country is slightly less in the form of gold than in the form of silver. The less bulky the metal in proportion to its value, the smaller will be the cost of transporting it, and the narrower, therefore, the limits within which the rate of exchange can vary. But the difference is, in practice, small. Insurance, which counts for a large proportion of the total cost, depends not on bulk but on value, and so does loss of interest in transit. Even the cost of handling is apt to be charged for on an arbitrary basis.

When gold is called an international currency, it must not be inferred that international debts are actually payable in gold. A debt is payable in the currency of the place where it is due. The reason why gold is employed to settle international balances of indebtedness is that in every gold-standard country bank credit can be bought and sold at a fixed price for gold; gold can be transformed into the means of payment. In order to *use* the gold, this transformation first must be effected.

Under the free coinage system the gold can be turned into coin at the Mint, and the coin deposited at a bank. But unless the gold is destined to pass into circulation, the time and labour employed in coining are wasted. The seller of the gold has got all he needs when he has been credited with the proceeds by a bank, and the bank is content to keep its gold in the form of bullion, except so much as is likely to be required for circulation at short notice.

Central banks accordingly make a practice of buying gold bullion at, or fractionally below, the coinage price, and in some countries they are bound by law to do so. Anyone is free to take gold to the Mint, but in practice bullion dealers find it more convenient to sell the gold to a bank, and no one except the central bank ever brings gold to be coined.

The price at which the Bank Charter Act of 1844 bound the Bank of England to buy gold was £3 17s. 9d. a standard ounce, or 1½d. below the coinage price. This was intended to be equivalent to the loss of interest during the process of coinage. It is 0·16 per cent., or about three-weeks' interest at 3 per cent. The loss of interest during coinage is an imperfection in the application of the pure doctrine of free coinage. Slight as it usually is, it may be materially augmented in special circumstances. Not only may the short-term rate of interest be high, but, if demands for coinage became exceptional and overstrained the capacity of the Mint, there might be long delay in meeting them. If coin were the only legal means of payment, a central bank obliged to buy gold at a fixed price and to pay coin to its depositors and note holders on demand might be compelled to suspend payment merely because it could not get gold bullion turned into coin quick enough to meet a panic demand. The best preventive of such contingency is the use of paper money of suitable denominations to take the place of gold coin.

Sometimes a percentage charge, called seignorage, is made for coinage. The man who brings a certain weight of bullion to be coined receives back a weight of coins less by this percentage. Under that system no bullion will be brought to be coined unless the value of the monetary unit (as determined by the quantity theory) is sufficient to pay for the bullion; that is to say, the value of the unit must exceed the value of the bullion contents of the coin in which it is payable by the seignorage percentage. And the coin will not be exported or melted unless the value of the monetary unit falls below its actual bullion contents. This system therefore permits a wider range of variation to the monetary unit than the free coinage system. It is as if the gap between the import and export specie points were increased by the amount of the seignorage. A small seignorage, a fraction of 1 per cent., is a not uncommon feature of present-day coinage systems; it logically implies an equivalent difference in the buying and selling prices of gold bullion at the banks. Large seignorage charges were formerly common, but are now a thing of the past.[1] An exorbitant seignorage charge is essential to a profitable debasement of the coinage. If the debased coins are issued too freely the monetary unit is depreciated and the profit vanishes.

Even under the system of free gold coinage and convertible paper, the equivalence of the monetary unit to its nominal value in gold is never anything but an approximation. The approximation may be made very close indeed, if the coinage is perfectly executed and efficiently regulated, and the arrangements for the payment of money for credit and credit for money are genuinely free. If a large part of the coinage is below weight, either from wear or from imperfect execution, or if obstacles are interposed to the conversion of credit into coin or bullion, there may be an appreciable discrepancy between the nominal and the actual value of the monetary unit in gold. It is a mistake to suppose that even the general circulation of an unimpaired gold coinage is a complete safeguard against this. Before even good gold coins begin to be melted down, the market price of bullion must *already* be high enough to make melting profitable. And a profit which will pay for the melting down of a considerable quantity of coin will not pay for a small quantity. The accumulation of sufficient quantities to pay for melting, and the elimination therefrom of the lighter coins require time and trouble. Unless a gold circulation is supported by adequate arrangements for the conversion of large credits into gold of full weight on demand, it will not by itself prevent quite a perceptible premium being paid for gold. In fact, since the gold market, like all other markets for raw materials, is concerned exclusively with large quantities, the gold value of credits can only be regulated by means of the convertibility into gold of sufficiently large credits.

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[1] That is to say, in coinages otherwise free, where the seignorage is a fixed charge in proportion to the amount coined. The difference between face value and bullion value is often called seignorage in the case of coin issued at the discretion of the Government.

The basis of monetary theory should be the money of account. To treat the money of account as the unit for the calculation of *prices* is to do it less than justice. It is primarily the unit for the calculation of *debts*, and its use in the calculation of prices merely follows from the fact that the quotation of a price is a proposal for the creation of a debt. The conception of a debt enforceable by law or custom lies at the root of all the economic relations of human society, and this conception presupposes a money of account for the reckoning of the debt. Every day new debts are created and old debts discharged, but these changes only modify and do not destroy the identity of the corpus of debts, which continues in being from day to day. If at any time the standard coin is changed, the same debts that were legally enforceable immediately before the change remain legally enforceable immediately after it. They and the unit in which they are reckoned continue, even if their value in terms of wealth be changed.

A change in the metallic value of the unit may be inconvenient, unjust, disastrous. In some circumstances it may be both equitable and beneficial. Or again, it may attain justice through grave hardship, or ease at the cost of injustice. Whatever its merits or defects, the change of standard finds the network of debts in continuous existence. In form the network is the same after the change as before it. It is a mistake to define the unit of account in terms of the metallic standard; for the unit of account is that which persists even when the standard changes. Originally the English pound sterling was represented by 4995 grains of fine silver. Repeated reductions gradually brought it down to 1719 grains in 1601. From 1717 to 1798 it was represented alternatively by 1719 grains of fine silver or 113 grains of fine gold, and the Coinage Act of 1816 equated it to 113 grains of fine gold. Its value in the market has often diverged appreciably from its legal value in the precious metals. Yet it is always the same pound sterling; it would always have been wrong to *define* it as 4995 or 1719 grains of silver or as 113 grains of gold. The pound sterling can only be defined as the English unit for the calculation of debts. A pound is a pound. It has preserved a continuity of existence from the Dark Ages, a continuity hardly surpassed by any human institution except the days of the week.

In some countries the continuity has been interrupted, when, after a debasement or degradation of the standard or an over-issue of paper money, an equitable adjustment of debts has been made, those incurred during the period of disturbance being made payable at something less than their face value. We shall have occasion to mention more than one instance of this in the succeeding chapters.

Sometimes two monetary units are in use concurrently. For example, when an issue of paper money has become seriously depreciated it may be that people take to making bargains expressly payable not in paper but in metallic money. Sometimes, again, the monetary unit becomes disconnected from the legal money; debts and bank credits remain interchangeable, but can only be converted into cash on payment of a premium. This has happened more than once in the great financial crises of the United States. In the crisis of 1873 there was even a small premium on the paper money, though the paper money itself was at a substantial discount in comparison with gold.

CHAPTER XIII.

THE THEORY OF BANKING.

THROUGHOUT the preceding pages currency has been treated as something subordinate to credit. It is not suggested that that is the only legitimate standpoint, to the exclusion of the more commonly accepted view of metallic money as the primary means of exchange, with credit as a useful and economical supplement to it. But this treatment of the subject has the practical advantage that in business, as at present organised, credit holds the predominant position, and the functions of money have in actual fact become relatively subordinate. And it has the theoretical advantage that a sale for metallic money is in all cases analysable into the creation and extinction of a debt, i.e. into two credit transactions. From the opposite point of view a sale for credit might perhaps be regarded as the uncompleted portion of a sale for money, but in fact it usually happens that the sale is completed not by the payment of money but by being set off against another similar credit transaction. Nor can the significance of the legal tender quality of money be understood except in terms of debts (credits). An exchange of commodities is something voluntary; nothing legally enforceable occurs until a debt is created, and it is only when a debt is created that the law can prescribe how it is to be discharged.

The adoption of this point of view requires us to devote some space to the theory of banking. For bankers' obligations are the form of credit used as the medium of payment. In Chapter I. we defined a banker as a dealer in debts. For the most part, however, he does not *buy* debts, he *creates* them. Even when he buys them, as when he discounts a bill of exchange, the debts have usually been created for the express purpose of being sold to him. Apart from such transactions a bankers' purchases of debts are usually from other bankers.

The debts created by bankers or created for the purpose of being assigned to bankers are usually those that arise out of production, including dealing, transport and the construction of fixed capital. Production may be regarded as making society the debtor of the producer. But the ultimate amount of the debt is speculative ; it depends on the market for the product. Society will not pay its debt till the product is ready and is sold to the consumer. In the interval the banker undertakes society's debt (subject, of course, to discount) or such part of it as the producer immediately requires. The banker's obligation so assumed is to the producer a means of payment ; whatever wealth he needs during the process of production he can buy with it. But he can only buy wealth which *exists ;* the bankers' obligations are not themselves wealth. At any moment there is a balance of indebtedness from society to the producers in respect of all that they have contributed by their services and their property towards the production of wealth, which is still incomplete, or which, being complete, is not yet marketed. In so far as this indebtedness of society has been undertaken by the bankers it apparently gives the producers the right to buy wealth which is not yet ready for them. But, as against this, the producers choose to keep a large part of their purchasing power in reserve unexercised, and this is what we have called the unspent margin. To this extent society is not called upon to pay its debt to them immediately, and the bankers, who have taken over the debt, reap the benefit. While they earn interest from the producer and the trader in consideration of their having taken over the debt, nevertheless they do not have to *pay* this part of the debt at all.

It should be observed that there is no necessary equality between the bankers' liabilities on the one hand, and the indebtedness of society to the producers on the other. The stocks of incomplete or unmarketed wealth may exceed the reserves of unexercised purchasing power. In that case the difference must be provided for as part of the capital investments of the community. If, to take an extreme case, no one ever kept any credit unspent, so that there were never any outstanding bank deposits, the advances made by the banks could not exceed their own capital ; a bank, in fact, would be merely an agency for investing a part of the savings of the community in temporary loans. Savings are in any case applied in exactly the same way to accumulating the necessary stocks of commodities in course of manufacture or awaiting sale, as to providing the fixed capital of industry and transport, and are only supplemented for the purpose by bank advances. If the banks' advances to traders exceed the total of their deposits, the excess must be covered by their capital. Or, again, there may be, side by side with the banks, finance or discount companies which apply their capital to making temporary advances. If, on the other hand, the temporary advances made by the banks are *less* than their demand liabilities, they must hold some other assets. In any case, of course, they hold a certain amount of cash, but besides this they may hold some permanent investments. And, in fact, practically all banks do hold some permanent investments, while in some countries they act as promoters and participators in capital enterprises on a large scale.

Thus there is no *necessary* connection between the two sides of a banker's business—the demand liabilities which provide the medium of payment, and the temporary advances to traders. The union of these two functions in one agency is a great advantage from the point of view of convenience, and important consequences flow from their being so united. But in some respects it is desirable to study each in isolation from the other.

In the first place, let us consider the business of making temporary advances. The sale of goods to the consumer is a continuous process. To a great extent production is likewise a continuous process ; and where it is not continuous it is usually periodical, depending on the recurrence of harvests. Between the processes of production and consumption there intervene those of transportation and dealing, in which the goods are almost necessarily dealt with in *large* quantities. The sales of the manufacturer, the purchases and sales of the merchant, and the purchases of the retailer are all made on a large scale, and consequently the amount of goods in the hands of any one of these is subject to a succession of discontinuities, being large immediately before a sale or after a purchase, and small immediately before a purchase or after a sale. If there were no temporary borrowing, every man's permanent capital would have to be enough to pay for the maximum quantity of goods that he at any time has in his possession, and whenever the goods on hand fell short of the maximum he would have a balance of idle money equivalent to the difference. From the point of view of the individual trader the advantage of temporary borrowing is that it enables him to escape the necessity of maintaining at times a large balance of idle money, which is earning no interest. In fact, it enables him to economise balances. It is immaterial whether the borrowing is from a banker or financier, or from other traders. It might be done quite effectually enough by means of bills drawn by sellers on buyers, or by mere book debts between them, with periodical settlement. Whatever the practice may be, the purpose is to economise balances. And if metallic money is used, economy in balances means economy in the use of metal and a real saving of wealth. If, however, legal tender paper is, in any case, used (and this, as we have seen, is something distinct from bank credits, even if the latter are represented by bank notes), there is no saving of wealth to the community. Economy in balances means diminished issues of paper money, and the trader's saving is effected at the expense of the profits of issue which would accrue to the issuing authority.

The advantages of temporary borrowing, however, are not limited to the saving of loss of interest on idle money. Apart from the power of borrowing, a merchant would be limited in all his enterprises to the permanent capital of his business. Even if this permanent capital were enough to cover all ordinary fluctuations in his stocks, it would still be insufficient to enable him to take advantage of exceptional opportunities for large purchases, which his special skill and knowledge of his trade might disclose to him. Thus temporary borrowing introduces an almost necessary element of elasticity into the merchant's business. Without it his special function of anticipating the future needs of the community would be arbitrarily circumscribed.

At a time of crisis the panic-stricken clamour for money is, in part at any rate, the consequence of the withdrawal of the usual facilities for temporary borrowing. Traders are compelled to keep larger balances (not necessarily of cash, they may be of credit) because they cannot rely on borrowing.

The other side of the banker's business, the assuming of obligations to be used by their creditors as the medium of payment, might be completely separated from the operations of making temporary loans. The assets held by banks of issue against their notes often include no temporary loans at all. This is true, for example, of the United States National Banks. In theory ordinary bank credits on current account might be based entirely on cash and permanent investments. All that is required is that the assets should be sufficient to meet the liabilities, and that the margin of cash should be sufficient to pay the credits on demand whenever necessary. If the practice of making temporary loans did not exist, it may be supposed that the need for bank credits as the medium for large payments would lead to the establishment of banks on some such basis. The service rendered by such banks to trade would be the avoidance of the trouble and expense of counting, transporting, and safeguarding the legal tender money which would otherwise have to be used. If the legal tender money were of metal they would also effect a saving by economising the use of it. But here, once more, if the legal tender money were paper, there would be no real saving, only a gain to the bankers at the expense of the profits of issue.

The existence of the unspent margin, a fund of unexercised purchasing power, is an opportunity of profit. This opportunity may be deliberately waived in order to maintain a metallic currency. The whole of the unspent margin might be held in the form of cash under an unqualified free coinage system, or if a part be composed of notes or bank credits, the notes and bank credits might be supported by an equal amount of coin or bullion. But if this rigid system be not adopted, a part of this fund will provide profits for some one. In so far as the unspent margin is held in the form of legal tender paper unsupported by metal, the profit goes to the issuing authority. In so far as it is held in the form of bank credits unsupported either by metal or by legal tender paper, the profit goes to the banks, though the banks may share it with their customers by paying a certain amount of interest on current accounts.

Banks are often spoken of as providing "capital." They are said to receive capital from their customers, who would otherwise leave it idle, and to lend it out to traders who are in a position to use it fruitfully. The depositor who keeps a balance idle does, it is true, forego a power of command over capital which he might have exercised, and the borrower from the bank gains and uses the power which the depositor abstains from using. But the capital itself, the actual goods and services which the borrower buys, never comes into the banker's possession at all. The banker is never anything but a debtor and creditor. He provides capital in the sense that the shareholder and the debenture holder provide capital. The trader's balance sheet shows on the debit side sums due to the shareholders, the debenture holders, and the banker, and on the credit side the value of what the economist calls capital, such as buildings, machinery, stock-in-trade, promotion expenses, etc. The abstention from spending, which provides the savings subscribed by the shareholders and debenture holders, is similar, from the standpoint of the balance sheet, to the abstention from spending, which provides the "unspent margin" and so makes the banker's business possible, though the motive in the former case is the wish to acquire an income-yielding investment and in the latter the convenience of keeping a certain amount of purchasing power in hand.

When banks are said to receive capital from their depositors and lend it out to traders, this is not quite an accurate description of what happens, even if capital be taken in the balance sheet sense. The only unexercised purchasing power that the banks receive from their depositors is the cash paid in, chiefly by those who receive cash rather than credit in the course of business, such as retail shopkeepers, railway and tramway companies, collectors of working-class rents, etc. Apart from this, the banks *create* purchasing power in the process of granting credits. It rests with them to increase or diminish the unspent margin by accelerating or retarding this process of granting credits. And as they increase or diminish the unspent margin, they increase or diminish the supply of "capital" for balance sheet purposes.

This increase or decrease in the capital items on the debit side of the traders' balance sheets will be accompanied by a corresponding increase or decrease in the goods, whether finished or in course of manufacture, on the credit side. The change may be in the quantity of goods or it may be wholly or partly in their money value. In so far as the change is in money value the change in the amount of capital is only nominal.

Both the assets and the liabilities of the trader are commonly called "capital," and it is important to avoid the confusion which this double use of the term may cause. When there is said to be an abundance or scarcity of capital, what is usually meant is not that there is an abundance or scarcity of wealth adapted for use in production, but that the banks are willing or unwilling to lend. At the time when the scarcity of capital is most acute, that is to say in a crisis, there is an embarrassing plenty of commodities, because merchants are selling them at a sacrifice for want of the credit on which they rely for holding them.

Bankers' obligations which are to serve as a medium of payment should be obligations *already due;* in other words, they should be demand liabilities. If they were only due at a future date, it would be necessary to allow discount in reckoning their value. The trouble of calculation would make them an inconvenient means of payment, and the exact rate of discount allowed might have to be the subject of a bargain. Plenty of exceptions may be found to this general rule. In the eighteenth century many banks issued notes which were not payable as of right on demand. They might be payable at a certain interval after demand, or the banker might reserve himself an option of postponing payment for a certain time and paying interest. And in Lancashire till the middle of the nineteenth century bills of exchange regularly passed from hand to hand as the means of payment for goods, accumulating an almost incredible number of endorsements in the process.

Deposits subject to notice and yielding interest are a form of banker's liability intermediate between a balance of cash and an investment. But so long as notice is not given they cannot be used as a medium of payment ; the depositor cannot assign them by cheque until he has transferred them to current account.

The circumstance that always tells against the common use as a means of payment of any form of banker's obligation other than one payable on demand, is that a future obligation, which yields interest, tends for that reason to be kept as an investment till maturity. Economists have often argued that bills of exchange are "currency" as much as bank notes or cheques.[1] But this, at any rate, is an essential distinction, and in practice bills sleep quietly till maturity in bankers' portfolios, only exceptionally being roused up to go for a moment into the daylight to be rediscounted and change their masters.

Exponents of the theory of banking and practical bankers alike are obsessed with the dangers of a great mass of demand liabilities. It is all very well to say that all the depositors and note holders of the Bank of England never will demand payment together, but *if they did* the Bank of England would be unable to pay. No bank can be quite safe, unless, like the old banks of deposit at Hamburg and Amsterdam, it retains a stock of specie equal to the whole of its demand liabilities.

The practice of maintaining as large a proportion as possible of the assets of the bank, other than the cash reserve, in the form of bills or loans for short periods is commonly recommended as the best safeguard against these dangers. If the depositors begin to draw out money, the bank can protect itself by stopping the grant of fresh loans and letting the existing loans run off day by day as they fall due. Unless there is that simultaneous rush for money which is called a " run " on the bank, this process is likely so to strengthen the bank's cash reserves as to enable it to meet all demands. If not, the bank may have to raise money elsewhere, and for this purpose the most efficient method is the rediscounting of bills of exchange. At a time of stress lenders will be better satisfied with a security of which the capital will fall due in a short time than by stock exchange securities the capital value of which may be subject to a heavy depreciation.

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[1] Macleod so argued on the ground that "currency" is originally in legal usage a term applicable to all negotiable instruments.

This doctrine is true enough as far as it goes. But the question of the best assets to be held in support of a banker's demand liabilities raises a variety of other considerations.

In the first place, there are two quite distinct conditions of solvency ; the assets must exceed the liabilities by a sufficient margin, and cash must be always forthcoming so far as required to meet the demand liabilities. The former is a condition which applies to all businesses, the latter is peculiar to banks. And the rules of maintaining general solvency are in many respects the same for banks as for other businesses. There must be an adequate margin of capital, reinforced so far as possible by a balance sheet reserve ; every reasonable precaution must be taken to be sure of the solvency of people to whom loans are granted ; before profits are divided, proper provision must be made for bad or doubtful debts and for the depreciation of assets, such as long-term investments. A manufacturer has a large fixed capital and may have little or no temporary indebtedness ; a merchant will have a relatively larger temporary indebtedness. But temporary indebtedness will take a much smaller place even in a merchant's balance sheet than demand liabilities in a banker's. In order to support this large liability of a fixed money value, the banker requires to have adequate assets of a fixed money value. Long-term investments are liable to an indefinite capital depreciation, and consequently the banker needs short-term investments, not merely to help him in maintaining cash payments on demand, but to keep him solvent. The snare of long-term investments has been demonstrated again and again by the failure of savings banks managed with scrupulous care and apparently with prudence. They cannot remain solvent if they have to buy investments at a high price when savings are plentiful, and to sell them at a low price when savings fall off. In countries where the mercantile business is relatively small, as compared with the volume of production, banks are tempted to venture on long-term investments. So long as they maintain a considerable proportion of short-term securities and choose suitable " gilt-edged " long-term investments, there may be no harm in this. The danger is that they may assume the functions of company promoters or underwriters, and may get burdened with blocks of securities which are either unsaleable or can only be realised at a heavy sacrifice. Or in an agricultural country they may advance sums on mortgages of property which will not fetch adequate sums in the market in case of foreclosure. The vice of such practices is not so much that the investments are for long terms or that the capital is not repayable—indeed, in the case of mortgages the capital is repayable—but that the value of the investments themselves is doubtful. But this uncertainty of value is itself characteristic of long-term by contrast with short-term investments. The chance of a merchant who appears perfectly solvent in June failing in September is small. The chance of land which forms the security for a mortgage suffering a serious deterioration of value in the course of three or five or ten years is considerable. It is rightly considered a principle of sound banking that a large proportion of the bank's assets should consist of bills, advances or other short-dated securities, but the most cogent reason for this is that it is difficult otherwise to maintain its general solvency.

Even if banks do not themselves enter into the investment market and run the risk of tying up part of their assets in unrealisable shares, they may get into the same difficulties by advancing money to the investment market. The embarrassed underwriter or company promoter, compelled to hold the securities which the public will not buy, must have recourse to his banker. If he can put down adequate security the banker will grant him an advance. But if his is not an isolated case, if the investment market as a whole is embarrassed by a failure of the investment demand from the public, it may be impossible to realise securities which are in themselves irreproachable. When investment securities have to be sold, the purchase money can only be obtained either from the savings of the investing public or from the creation of bank credits. Consequently the extent to which the aggregate of bank credits can be reduced by the sale of such securities is limited by the supply of savings available for investment. Advances on investment securities, even though they appear to be a very liquid asset, are sometimes found in an emergency to be frozen up.

The existence of any large class of traders, whether they be bankers, underwriters, finance companies, or any others, with long-period assets and short-period debts, is always a source of danger. This is the real ground of the prejudice against what are called "finance bills" or "accommodation bills," i.e. bills of exchange drawn not to provide money for the purchase of goods destined for an early sale, but to cover a deficiency of ready cash. There is absolutely no harm in borrowing to meet a deficiency, *provided* the deficiency is temporary. There is no special virtue in a deficiency caused by the purchase of goods. In the course of business there may be a hundred and one legitimate reasons for anticipating future receipts or for abstaining from calling in loans to provide funds for the purpose of defraying an immediate liability or of seizing a promising opportunity. The vice of the finance bill is in the use of it to raise money for the construction of fixed capital, when the necessary supply of *bona-fide* savings cannot be obtained from the investment market. This abuse of the system was a conspicuous feature of the Overend & Gurney crisis of 1866, and also of the American crisis of 1907.

In considering the means of maintaining the payment in cash of a bank's demand liabilities, we must distinguish between the requirements of normal times and those of a crisis. In normal times the responsibility must rest exclusively on the individual banker; in times of crisis, while he must play his part, more depends on the attitude of the authorities, whether the Government or a central bank, in whom the control of the banking situation ultimately rests. In normal times the banks are in competition with one another. They endeavour to attract customers by the advantages they offer, in the form either of financial facilities or of local convenience. Each bank has its clientèle, people who have chosen for one reason or another to give it their custom. For the most part the borrowers from it will be included among its depositors. If a bank is a little too free with its loans, its customers will on balance pay away greater sums to the customers of other banks than they will receive. It will find day by day, when it settles accounts at the clearing-house, that it has to meet an adverse balance by paying away a part of its cash reserve. If it is to keep a cash reserve in due proportion to its liabilities, it must restrict its advances or perhaps transform some of its other assets into cash, for example by rediscounting bills. Whatever measures it may choose to adopt, the effect is that it must no longer outstrip its competitors in granting loans. And on the other hand, an unduly cautious bank will find a favourable balance due to it at the clearing-house ; its cash reserve will grow at the expense of its other assets, and its profits will suffer through its interest-earning assets being too small in proportion to the total. Thus there is a tendency for all the banks to keep pace in the granting of credits ; each can only extend its business by finding new customers, and the loans and advances that it can grant among a given circle of customers are practically limited.

A loss of cash may occur either through the grant of excessive advances or through a loss of confidence in the bank on the part of its customers. In the latter case the remedy is for the bank to borrow from its fellow-banks. So long as the loss of confidence is not deserved, so long as it can present a balance sheet that is demonstrably solvent, it can do this. The banking community will always be anxious to help one of their members, provided he be really solvent, for any banking failure will cause a shortage of the means of payment and will put them in difficulties. But it is one thing to be solvent and quite another to be able to give conclusive evidence of solvency. The solvency of a banker depends in the last resort on the solvency of those of his customers to whom he has lent. Of some of these he alone knows the affairs. Many a bank has come to grief and has yet paid 20s. in the pound when wound up, with a handsome balance over for the partners or the shareholders. There is thus a tendency, which may cause some injustice, for banks to prefer the claims of borrowers with large businesses, whose credit is a matter of general knowledge, to those of smaller borrowers, who in all other respects may be better deserving of accommodation, unless the latter can offer unimpeachable collateral security.

In assuming demand obligations a banker's functions are passive ; it is in lending that he plays an active part in trade. In lending he takes the responsibility for two kinds of decisions ; he selects the borrowers, and he determines the rate of interest. The borrowers want credit for the purposes of production. All production is more or less speculative, since its success cannot be measured, till it is complete and the product has been sold to the consumer. By lending, the banker to some extent participates in the speculation, though he can guard himself against the chance of loss by exacting collateral security from the borrower, on whom the main burden of the risk falls. By making the market rate of interest, the bankers, as a class, keep the demand for advances and consequently the supply of credit in their control.

Collateral security is primarily intended to give the creditor a preferential position in case of the bankruptcy of the debtor. But it also fulfils a function in the general regulation of bank credit. When a trader borrows, his private capital, that is to say, the excess of his entire assets over his liabilities, provides a guarantee fund against the risk of loss. If his indebtedness becomes excessive in proportion to his capital, the guarantee fund is inadequate, and the risk of loss to his creditors is correspondingly increased. That is what is called *overtrading*.

When a banker lends against collateral, he requires a *margin* of security to be provided. On granting an advance or discounting or accepting a bill, he requires the goods purchased with the money to be placed in his control, and he limits the amount of the advance or the bill to an agreed proportion, say 80 per cent., of the value of the goods. The borrower has to provide the balance of the value out of his own resources. If all his indebtedness is secured with a margin in this way, it cannot exceed a definite proportion of his own capital. Margin is likewise required where advances are made on the security of stocks and shares.

Bankers aim at keeping a fixed proportion between their cash reserves and their demand liabilities. The nature of these cash reserves depends very much on the credit and currency system in vogue. They do not necessarily consist entirely, or even mainly, of legal tender money. In England the practice is for banks to keep considerable deposits at the Bank of England. They settle balances with one another by drawing cheques on these deposits, and they only draw out legal tender money when they need it to hand over to their customers. The great English joint-stock banks have a multitude of branches, and their cash reserve, which figures in their balance sheets usually under the description "cash in hand and at the Bank of England," consists partly of the working balances of cash needed for the day-to-day needs of all their branches, and partly of their credit balances at the Bank of England. These reserves are supported by another item in the balance sheet, "cash at call or short notice," which is money lent, chiefly to discount houses, practically from day to day. Although it can be withdrawn almost on demand, this call money is different from a deposit with a bank in two respects; first, it is not assigned away by cheque and so cannot be used as a means of payment; secondly, it earns interest, not at the specially low rate allowed on a deposit subject to notice, but at a rate only a little below the full value of the use of the money.

The discount houses that borrow this day-to-day money invest it in the discounting of bills of exchange. They resemble bankers in that their liabilities are more "liquid" than their assets, and they are in practice *more* exposed to sudden demands than the bankers themselves. For the bankers regard this money at call as the means of replenishing their reserves if necessary. If their reserves run short they call some of the money up. The discount houses may be able to pay the sums called from the proceeds of bills falling due; if not, they borrow from the Bank of England. Whenever credit begins to outstrip cash in the London market, the effect is felt in a tendency on the part of the discount houses to borrow from the Bank of England, and indeed the "Bank rate" is the minimum rate at which the Bank is prepared to lend, if requested, in those circumstances. When the Bank so lends, its assets are increased by the amount lent and its liabilities by an equal amount. The Bank's liabilities are deposits, and the additional deposits in the hands of the discount houses are passed on by them to the banks who have called money from them. Thus the effect is that the credit balances of the joint-stock banks at the Bank of England are increased, and the shortage in their reserves is made good. When the Bank rate is high, the discount houses cannot afford to borrow unless they charge correspondingly high rates for discounting bills. Consequently the rate of discount, as well as the market rate for day-to-day money, tends to follow the Bank rate. This system of keeping money at call enables the great London banks to conduct their business in normal times without borrowing.

The banking system of the United States resembles that of England in that one bank deposits a part of its reserve with another. Before the passing of the Federal Reserve Act of 1913, a number of large towns were designated reserve cities, and there were three "central reserve cities" (New York, Chicago, and St. Louis). The National Banks in the reserve cities held deposits from the National Banks in the smaller places around them, and these deposits were counted as part of the statutory reserves of the latter. The National Banks of the central reserve cities likewise held deposits from those in the reserve cities. This differed from the English system in that there was no centralisation of the deposits, which were thus counted as cash reserves, in a single institution.

The Federal Reserve Act introduced the central bank system. There is not a single central bank, but the country is divided up into twelve districts, and there is one Federal Reserve Bank for each district. The reserve requirements under the National Bank Acts have been swept away. All National Banks have to be members of the Federal Reserve System. They, and such State Banks and Trust Companies as are members, are required to maintain reserves not in cash, but wholly in the form of deposits at the Federal Reserve Bank. The reserve is required to be 13 per cent. of demand deposits in central reserve cities, 10 per cent. in reserve cities, and 7 per cent. elsewhere, together with 3 per cent. of time deposits in all places.

The Federal Reserve Banks rediscount commercial paper (i.e. promissory notes made by traders) for their member banks. The commercial paper must comply with certain prescribed conditions as to its origin, character and maturity. Member banks which possess eligible paper can make good their reserves or replenish their cash by means of rediscounts. Unity is introduced into the twelve Federal Reserve Banks partly by the authority of the Federal Reserve Board, which can regulate rediscount rates and can suspend reserve limits, and partly by the predominant position in the country of the New York Federal Reserve Bank. The New York rediscount rate is in effect the instrument by which credit is regulated throughout the United States.[1]

On the Continent of Europe the use of cheques is far less developed than in England and the United States. The clearing of cheques being a smaller affair, the banks have less need to keep considerable balances on deposit with the central bank. Rediscounting is therefore mainly for the purpose of procuring supplies of paper money.

Under all these systems the effect is that, in order that the ordinary banks may replenish their reserves when necessary, the central bank has to lend. Thus the demands on the central bank are always the index of the financial situation.

In times of financial tranquillity, when there is no crisis, or threat of crisis, it is discreditable for a bank to suspend payment. It may be as much the banker's misfortune as his fault, but the hard fact remains that he has failed to meet his engagements when his neighbours have fulfilled theirs. The failure of a bank, like all acts of bankruptcy, is a breach of faith. But it is somewhat more blameworthy than the failure of a mercantile firm. It is part of the business of a merchant to take risks; it is the duty of a banker to avoid them. If all merchants take risks, then some of their ventures must fail. The mere fact of failure is not evidence that a merchant has taken *undue* risks. But the mere fact of failure is evidence against the banker.

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[1] For a fuller description of the Federal Reserve System, see my *Monetary Reconstruction*, pp. 91-121.

On the other hand, at a time of crisis the case is rather different. If all the banks are suffering, not from an insufficiency of assets to cover their liabilities, but from a shortage of legal tender money, no one of them is discredited by embarrassments which are obviously attributable to a miscarriage of the currency system. The currency system is in the last resort regulated by the legislature, and it is not within the power of any individual banker to control it. If it breaks down, the responsibility rests on the legislature, or on the authorities entrusted by law with the management of the system.

It may, perhaps, be retorted that this is only so if the legislature has set up some artificial and unsound system, and that, if the clear and simple principles of the free coinage of gold be adopted and enforced, the responsibility may be left with the bankers so to shape their affairs as always to be able to meet their engagements. From this point of view a banker's business may be regarded as composed chiefly of dealings in "options" and "futures" in gold. A bank credit is an option to buy gold at any time; a loan or bill is an undertaking to deliver gold at some fixed future date. If, then, the banker is given the right to pay in paper instead of gold, he is thereby enabled to avoid the fulfilment of his engagements, unless the paper itself is convertible into gold. But if this is the correct theory the banker is exposed to the same dangers as any other dealer in futures and options. If the state of the gold market makes it profitable for his customers to exercise their "options," in other words, if the market value of gold tends to rise above its coinage price,[1] he may be called upon to find more gold than he possesses or can lay his hands on. At such a time he cannot get it from his fellow-speculators because they are in the same difficulties as he. Neither he nor they are necessarily to blame; the gold market may be influenced by conditions abroad, over which they have no control and of which they have no direct knowledge. It seems, therefore, that on this theory the risks of the speculator are inseparable from banking, unless the practice of the old banks of Hamburg and Amsterdam be adopted and the whole of the deposits be covered by bullion or specie.

But in reality this is not a tenable theory of banking at all. If the banker's obligations are payable in gold, that is because *all* debts are payable in gold. If the law makes them payable in gold, the law can at any time make them payable in something else. It is vain to say that it must not do so; in practice it frequently does. There is much to be said for the view that all currency systems *ought* to be based on a metallic standard, and that once the standard is chosen it ought to be adhered to at all costs. But however firmly the standard may be entrenched in the law, the law always *can* be altered, or even broken. The power of issuing paper money always exists in the background, even if it be expressly forbidden by law. The State cannot divest itself of this power or of the responsibility attached to it.

When in the throes of a crisis all the banks are faced with a desperate shortage of currency, the responsibility for taking measures of relief necessarily devolves on the State. Even if the fault lies with the individual banks, the remedy is not within their power. The pressing necessity is to provide the means of payment, and only the State can do this. The State cannot be relieved of this responsibility unless, as in China, the means of payment are settled by custom, and the powers of sovereignty are really insufficient to modify this custom.[1]

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[1] The option entitles the customer to receive the gold from the banker at the coinage price, paying for it by a cancellation of the banker's debt to him, which like all debts is computed in the money of account.

So long as the power of enacting what shall be the lawful means of payment resides in the State, the State has the responsibility of using that power. If it decides, for good reasons or bad, not to help the banks, there is likely to be a universal suspension of payments, such as has occurred more than once in the United States. Where all the banks suspend, no individual banker need feel ashamed. Suspension becomes the vogue, just as, when George III. was mad, it became the fashion for every one at Court to claim to have had a period of insanity in his past.

In fact, there is really no reason why the banker who has conducted his affairs with ordinary prudence should ever lie awake at nights oppressed by the abyss of demand liabilities at the edge of which his business is carried on. The demand for cash is not *capricious*. So long as crisis conditions do not arise, the circulation of money, being determined by the convenience of the public, will be approximately steady. A banker whose cash reserves fall off can readily replenish them from his neighbours, for the aggregate of cash reserves will not diminish suddenly. On the other hand, when a general shortage of cash does occur, this is a sign that there has been an undue expansion of credit, and that is a matter for which the responsibility rests not with the individual banker but with the central bank as the representative of the State. So long as the ordinary banker takes care that his assets are good, and does not swell his loans and discounts beyond the due proportion to his deposits, he is doing his duty to society.

If this responsibility necessarily rests on the State, ought not the State to exercise some control over the activities of bankers at all times ? It may be contended, with some force, that to defer the very beginning of control till the moment of crisis is to leave the preparations for defence till the outbreak of war. This is a much controverted question. It is not generally disputed that a close regulation of the right of note issue is desirable. It is usual, indeed, to restrict the right to a central bank, and to make its notes the paper money of the country, with the privilege of legal tender. Even where private banks of issue are permitted, it is usual, as in the United States and Canada, to make elaborate arrangements to secure the convertibility of the notes in all possible circumstances. The reason of this is that there is not the same personal relation between a bank and its note-holders as between a bank and its depositors. There is a greater danger of the bank's obligation being either too much or too little trusted when it is represented by a note than when it takes the form of a deposit. Moreover, bank notes may, in an emergency, be made legal tender, even if they are not normally so ; or, not being made legal tender, they may become by force of circumstances the only means of payment available for retail transactions and the payment of wages. When the emergency comes, the difficulties of the situation may be greatly increased if the issuing banks have been allowed to get into an unsound condition.

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[1] Or, theoretically at any rate, the power of the State over currency might be limited by a written constitution.

A close State regulation of banks of deposit is more doubtful policy. It is easy to justify in principle. The banks provide what is in practice the principal means of payment in business transactions. That so vital a service should be well and honestly rendered is a matter of primary public importance. It is arguable, however, that it will be better rendered under a free system than if subjected to artificial limitations.

The question is not one that can be decided entirely by general principles. The purpose of control is to secure that the banks both have and deserve the confidence of the public. They must have sufficient cash reserves to pay their demand liabilities, and they must have good general assets. One bank cannot be more liberal than the rest in granting loans and discounting bills without having to meet an adverse balance at the clearing-house. This operates as an automatic check on imprudent lending. One bank may, it is true, adopt a lower standard of cash reserves than another, and may increase its profits at the expense of its power to maintain cash payments. But the narrower its margin of cash the less scope it has for inflating its loans. If its reserve is already cut down to the minimum sufficient for its day-to-day needs, the slightest laxity in the extension of loans will put it in difficulties and compel it to borrow. Consequently, though the suspension of payments, when it does occur, is caused by the exhaustion of the cash reserve, this is really less likely to be due to a settled policy of cutting the reserve too fine than to an outburst of lending which dissipates a reserve originally sufficient. If a banker is tempted to seek the large profits which may be gained from imprudent banking, he will proceed to increase his loans. Were he to reduce his reserve, he would only hamper his own freedom.

A statutory regulation of reserves, such as is established in the United States, does little to promote sound banking. Apart from the obvious criticism that just at the time when the banks ought to be using their reserves, they cannot pay them out without reducing them below the legal proportion, there is the serious weakness in the system that it does nothing to prevent that inflation of credit which leads to the depletion of the reserves. Either an individual bank or the banking community as a whole remains free to set in motion forces which must, in time, reduce the reserves below the proportion, and, when this inevitable result comes about, the effect of the legal limitation is only to intensify the difficulty by stopping fresh business. Three times, in 1873, 1893, and 1907, there has been an almost general suspension of cash payments by the American banks. The Federal Reserve Act has done much to guard against the dangers to which the system established by the National Bank Act of 1863 was subject. If the reserve of any bank runs short it can be replenished by rediscounting paper with the Federal Reserve Bank, while the reserve requirements themselves are subject to the dispensing power of the Federal Reserve Board. If paper money is required rather than a bank credit, the Federal Reserve Bank has a power of issue which, though restrained by the sliding scale of taxation, is not subject to any cast-iron limit. Thus it is no longer the statutory reserve proportions but the control of the reserves by the Federal Reserve Board that is relied on to prevent inflation. And, that being so, it is arguable that the statutory reserve proportions (which have, in fact, been substantially reduced below the ratios adopted in 1863) no longer serve any useful purpose.

Reserves on the American model are sometimes advocated as a means of securing the central bank control over the other banks. They may be compelled to rediscount bills in order to maintain their reserves. But so long as there is any paper money uncovered by gold, there must be some securities to cover it, and by reducing other securities the central bank can compel the other banks to rediscount. If for any reason it is deemed desirable to hold more gold than can conveniently be held against the note issue, the real effect of statutory reserve proportions is to throw the expense of holding a part of the gold upon the banks. It is, in effect, a tax on banking.

A striking feature of the American system of comprehensive statutory regulation of banking is the prohibition (with minor exceptions) of branch banks. The result is that there are between 25,000 and 30,000 separate banks in the United States. Many are small, and of small resisting power. Hundreds of little banks suspend payment every year.

On the other hand, when no such prohibition is in operation there is a tendency for banks to go on amalgamating till almost the whole banking business of a large country is concentrated in the hands of a very small number—like the so-called Big Five in England. If amalgamation were allowed to take its course, it might culminate in the creation of a single monopolist bank. Such a possibility raises the question of the nationalisation of banking, a subject which it is not necessary to discuss in the present volume.[1]

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[1] A brief discussion of the nationalisation of banking will be found in my *Economic Problem* (pp. 363-6).

CHAPTER XIV.

WAR FINANCE AND INFLATION.

WHEN we criticise human institutions as they are, and attempt to gauge their soundness under strain on the assumption that, whatever the strain, they remain unaltered, we are implicitly taking it for granted that the strain is subject to a certain limit. We have not been supposing that the currency systems which we have been considering were capable of remaining in all circumstances unaltered. We have recognised that at a time of crisis the law may be broken or even amended. We have seen the statutory limitation of the Bank of England's right of note issue suspended by an executive act, or banks of issue charging a premium on gold when an excessive export is threatened. We have shown that the greatest *normal* strain to which the currency system of a country can be exposed is that which arises from the occurrence of a crisis in a neighbouring country with the same metallic standard. This strain can be called "normal," because financial crises are as unavoidable in credit systems as shipwrecks in navigation. The management of credit, like the management of a ship, is perilous, and financial crises, like shipwrecks, are the penalties of a miscalculation, immunity from which is almost unattainable. But so long as crises of this type, arising from the inherent difficulties of the regulation of credit, are in question, the departures from the law, like the law itself, may be assumed to be directed exclusively to the maintenance or restoration of sound conditions. This singleness of purpose constitutes the limitation implicitly assumed.

The circumstances which we now have to investigate are different. We shall find an imperative national need overriding all other considerations, and leading to disorders in the credit system, which would hardly arise from any less overwhelming cause. Scarcely any contingency but war [1] is sufficiently grave to produce these consequences, and therefore the subject of examination may practically be narrowed down to the relations of currency and credit to war finance.

War finance is a branch of Government finance. By finance we mean the art of providing the means of payment. In theory the sovereign state can exact services from its subjects without payment, as, for example, it may compel them to serve on juries or in the army. But in practice this method of compulsion is limited in its scope, and the State pays for those services which it cannot conveniently compel, and buys those goods which it cannot conveniently requisition. In fact, vastly the greater part of the activities of the State are carried on by the services of paid employees and with commodities bought in the market. It is the function of Government finance to provide the means of payment needed for these purposes. This is done primarily by means of taxation. The individual citizens are compelled to contribute money to the Government. The taxes paid form part of what we have called the " consumers' outlay " of the taxpayers. The money is received by the Government, and expended upon the goods and services necessary for carrying on the business of the State ; it is then included in the " consumers' income " of the Government employees and of the people who produce goods which are sold to the Government. If the income and expenditure of the Government are equal, the corresponding items in the consumers' outlay and the consumers' income, taken over the whole community, balance.

But, of course, even if income and expenditure are ultimately equal, the proceeds of the taxes cannot be expected always to come in exactly as and when they have to be spent. At one time income will overtake expenditure, at another it will fall behind, and temporary borrowing is needed to equalise the balances of the Government, as much as those of private traders. Moreover, Governments, like private traders, from time to time have to incur large items of capital expenditure. As to how they ought to draw the line between expenditure chargeable to revenue and expenditure chargeable to capital, and what provision they ought to make for sinking funds, these are questions which do not arise here. It is enough that, besides raising revenue by taxation, Governments find it advisable to raise it by borrowing, both temporary and permanent. When they do so, they borrow from the same sources and through the same channels as private traders. Their temporary borrowing will be mainly from banks and discount companies. Their permanent borrowing will be from the savings of the community.

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[1] Revolution, it is true, has as sinister a record as war in the wrecking of currency systems. But this has usually been the work of Revolution complicated by either foreign or domestic war.

How does it come about that Government finance trespasses on the domain of currency and credit? So long as the Government only raises money by taxation, by loans which are supplied exclusively from genuine savings, and by temporary borrowings in anticipation of such taxation and such loans, which are completely discharged from their proceeds when received, it is doing much the same as a private trader, though on a larger scale. The sums that it takes by tax or loan from the public are subtracted from what is applicable out of the consumers' outlay to form the demand for other commodities and services, exactly as if the services of the Government were just one among the various objects upon which the consumer could elect to spend his money. In applying the sums so raised, the Government diverts a portion of the productive resources of the community to public purposes. For the goods and services so diverted it has to compete in the market just as if it were a large private firm. The Government is a trader, selling law, order, and the organisation of society to its customers, the taxpayers.

Suppose that, owing, for example, to the outbreak of war, the expenditure of the Government is enormously increased. It has to raise increased sums by tax and loan, and it has to divert to its own purposes a correspondingly increased proportion of the productive resources of the country. By raising more money, it diminishes the sums left in the hands of the public for other expenditure. If it could raise all the requisite funds by taxation and by borrowing in the home market, this diminution in the expenditure of the public would so reduce the demand for commodities as to set free all the capital and labour needed.

At the outset there will probably be a heavy initial expenditure on mobilisation and other preparations, and it is impossible to raise large sums immediately from loans and taxes. Time is required to prepare either, and in the meantime the yield of the ordinary revenue is likely to be adversely affected by the derangement of business and the interruption of foreign trade. The result is that war finance almost invariably starts with a large amount of temporary borrowing.

There is here a danger of inflation. But, on the other hand, people who are expecting heavy taxation, and who are led to think that it is a patriotic duty to reserve all the money they can spare for investment in forthcoming war loans, are likely to restrict outlay, not only on personal consumption, but also on investment. There will be an immediate reduction in the consumers' outlay to set against the immediate increase in the Government's outlay for war purposes. But the extent and duration of this reduction depend on the policy of the Government in regard to taxes and loans. The expectations of the public will soon evaporate, unless something is done to bring about their fulfilment. Delay in imposing taxes and issuing loans will quickly lead to the restrictions in outlay fading away, and the consumers' outlay as a whole will be rapidly swollen by warlike expenditure.

Warlike expenditure will take the form partly of direct expenditure by the Government from the proceeds of temporary borrowing, partly of expenditure by contractors and others out of bank advances raised by themselves in anticipation of payment by the Government.

If the war is on a grand scale, the danger of inflation is increased by the profound disturbance caused to business of all kinds. Every commodity market will be in some degree involved. Speculative rises and falls of prices will stimulate activity in one direction, and cause embarrassment or even panic in another.

The investment market in particular will be shaken. The prospect of forced borrowing by the Government on a large scale will stifle the demand for existing stock exchange securities, and the market will find itself loaded up with securities which are saleable, if at all, only at a great sacrifice.

The whole situation will be vitally affected by the economic relations of the belligerent with other countries: the extent to which its normal trade is with other countries, the extent to which its intercourse with them is interfered with, and the extent to which it can draw upon their resources by means of borrowing, the sale of securities and similar measures.

If we assume a gold standard, the level of the currency unit will be measured by its gold value, and in practice that means by the foreign exchanges. The world gold market and the market for gold standard currencies are indistinguishable. The value of gold in a country may be divorced by restrictions on the export or import of gold from its value in the world market, and the value of gold coin may be divorced by restrictions on melting from the value of gold bullion. But these are departures from the gold standard; the gold standard means the close approximation of the currency unit to the value of a prescribed amount of gold in the *world* market.

A serious interruption of intercourse with foreign countries will profoundly affect the foreign exchange market. It may go so far as to deprive rates of exchange of all meaning. The important case for our purposes is that in which intercourse, even if partially interfered with, remains open on a considerable scale, and the problem of how best to make use of it for furthering the conduct of war arises in a practical form. Since the parity of the currency unit is measured by the foreign exchanges, and a situation involving a lapse from parity would present itself in the form of an uncovered excess of imports, the use made by the belligerent country of foreign resources is an essential factor in the problem of currency and credit in war time.

The initial distresses of business may be materially relieved from neutral resources. Neutral investors will be glad to buy securities cheap. Neutral traders will enter into the commodity markets, and will take a speculative interest even in branches of the export and import trade which have been completely suspended, in the hope of making a profit out of them when they revive or when alternative channels have been discovered. Neutral bankers will assist.

By such means the shock to business will be softened, and the transition to war conditions eased. Failing this aid, in particular in the case where the countries involved embrace a large proportion of the economic world, the break-down of business may be so desperate that an almost universal bankruptcy can only be staved off by special measures, such as the crop of moratorium statutes with which Europe blossomed out in 1914.

The initial difficulties once surmounted, it becomes necessary to provide funds, from taxes and loans, *pari passu* with the expenses of the war. Such taxes are imposed as the country can stand, and the balance of the war expenditure has to be provided by loan. The issue of the first war loan finds an accumulation of temporary debt, representing the expenses incurred since the beginning of the war, and a daily deficit in the present and future.

What are the sources from which money can be raised? In the first place, there are the savings of the people. The people may abstain from spending money that they would otherwise have spent, either on their own enjoyment or on investment in other directions, and may surrender the purchasing power thus kept unexercised to the Government in exchange for holdings in the war loan.

In the next place, existing securities may be sold. It is no use people of the borrowing country selling securities *to one another*. That will not increase the available fund of savings. The selling of securities will only be fruitful if they are sold abroad.

Thirdly, there may be direct foreign subscriptions to war loans. These may take various forms. Foreign investors may offer subscriptions for the ordinary war loans on the same footing as the people of the country. The terms of the war loans may be so devised as to facilitate such subscriptions (e.g. by the exemption of foreign holders from taxes which would ordinarily be payable) ; foreign subscriptions may be directly appealed for by issues on foreign investment markets ; or issues may be brought out on foreign investment markets entirely separate from any domestic issues and denominated in foreign currencies. The foreign subscribers may be neutrals seeking nothing but an attractive investment, or they may be friendly neutrals with a sentimental desire to help the belligerent, or they may be people of allied countries whose patriotic interests are one with those of the borrowing country. Allied Governments may make direct loans to one another or guarantee loans made in one another's investment markets.

In all probability the Government's activities in raising and spending money will materially modify the balance of payments. By raising money at home it reduces the consumers' outlay both on home-trade products and on foreign-trade products. It will spend the money partly on acquiring products of both classes in the market, and partly by diverting to new employment on warlike purposes labour and productive resources which previously supplied the market with products of both classes. In the market for foreign-trade products both demand and supply will be diminished. Probably they will not be diminished to an equal extent. So far as consumable products are concerned, however, there is no presumption that the balance either way will be very important.

On the other hand, in the particular case of a country which is ordinarily a considerable exporter of capital, a very large part of the restriction of the consumers' outlay will take the form of a restriction of foreign investment. Any reduction in people's resources is likely to fall in the first instance upon their savings, and, capital needs at home being unaltered, it will be the surplus of savings applicable to foreign investment that will suffer. This will be still more true of Government borrowing, which competes directly for people's savings with other forms of investment. A country which invests abroad can thus secure a favourable balance of payments, when involved in war, by simply diverting the surplus previously so invested into the hands of the Government. One which already possesses extensive foreign investments and derives an income from them is also likely, on that account, to obtain a favourable balance. It receives the income from foreign investments in the form of imports uncovered by any exports ; its consumption of foreign trade products will exceed its production, and when both are reduced by the exigencies of war, consumption will present a larger field for reductions than production. It is probable, but not certain, that the reduction in consumption will be greater.

A belligerent which has not these advantages may be faced with an adverse balance of payments. If the gold standard is to be maintained, that entails a contraction of credit. A contraction of credit is not necessarily a step to be avoided in war time. It tends to damp down production because it tends to damp down demand. But this is no disadvantage to the Government. If competing demands are checked, the Government will get the goods and services it needs both cheaper and more promptly. The yield of taxation is diminished when trade is depressed, but, on the other hand, Government borrowing is facilitated owing to the slackening of trade demands for capital.

Nevertheless, Governments at war shrink from contracting credit. They prefer to borrow abroad if they can. And if they can borrow abroad, they are likely to find it advisable to do so, not merely to correct a possible adverse tendency in the foreign exchanges, but to increase their total command of resources.

The real problems of war finance arise when the most has been made of taxation and of loans, internal and external, and yet the funds raised are not enough. A man in business who cannot raise all the capital he needs either abandons or curtails a project which he cannot carry through. Is a nation at war to leave its forces insufficiently equipped because it cannot raise money ? If it is at war at all, success is a matter of life and death; there is no half-way house between a whole-hearted prosecution of the war and an immediate peace.

And as we have already seen, it is possible to stave off a want of funds by temporary borrowing. Temporary borrowing has this advantage—or this danger—that the money to be borrowed *need not exist.* Directly or indirectly the lender is a banker; what he lends is a credit—his own obligation, which he himself creates.

Temporary borrowing which is really no more than an anticipation of more permanent resources, and is destined to be repaid when they are realised, is not in itself unsound. But as was pointed out in regard to the temporary borrowing at the outbreak of war, the danger arises as soon as the appearance of the permanent resources is deferred. The embarrassed Government hopes to raise enough by loan to pay off its temporary indebtedness, but fails to do so, and a balance of floating debt remains.

Up to a certain point the discount market can absorb the balance. The Government may borrow to make payments to contractors who, if they were working for the market, would themselves have had to borrow; one form of temporary borrowing is substituted for another. When the Government's temporary borrowing goes beyond this point, room may still be made for it by means of a contraction of credit. Traders are deterred from borrowing by high discount rates and other means, and are led to reduce their stocks of goods. In this way the war is being financed by drawing on the existing stock-in-trade of the community. When, in time of peace, credit is contracted, the consumers' outlay is diminished. But now we are supposing the advances to traders to be contracted only to make room for equal advances to the Government. The consumers' income is maintained by Government expenditure, no vicious circle of deflation is set up, and goods are easily sold off.

A belligerent country which is a great financial centre and possesses vast banking assets based on merchandise in all parts of the world, may obtain very large resources by contracting credit, and will incidentally secure thereby a favourable balance of payments. The experience of England in 1914 (see below, p. 396) illustrates the point, though on that occasion the operative cause was not a contraction of credit but a disastrous break-down of markets.

But neither in this case nor in any other is such a resource unlimited. If stocks of goods are reduced below the point at which it is possible to keep them, they must increase again. Temporary loans from abroad may be brought in to finance trade, but they also are limited (see above, p. 144).

Traders may be induced to apply their profits to reduce their indebtedness. When their stocks are already low, and when, perhaps, it is difficult to get fresh orders executed owing to the diversion of the country's productive resources to war work and the interruption of foreign supplies, they will begin to raise the prices charged to consumers. Arising from scarcity this rise of prices is not inflationary ; nevertheless, it swells the traders' profits, and incidentally turns part of their working capital into cash. One who ordinarily carries two-thirds of his stock-in-trade with borrowed money, may perhaps sell off one-third of the goods at prices 50 per cent. higher than he expected. He will realise a sum equal to half the value of the whole stock, and with it can reduce his indebtedness to one-fourth of its former figure.

The combination of a tight money market, high prices, and extreme caution on the part of both lenders and borrowers, will, therefore, lead to a reduction of stocks, and to a still greater reduction of bankers' loans. Moreover, one result of the difficulty of borrowing is that traders take advantage of their financial strength to free themselves from dependence on their bankers. The usual process by which they equalise balances, borrowing when they buy and paying off advances when they sell, exposes them to unwonted risks, and they may choose to keep large sums idle occasionally, rather than trust to borrowing whenever they have large payments to make. These idle balances need not be money ; credit will do just as well, unless there is a want of confidence in the solvency of the banks. Consequently, just at the time when the bankers' loans to traders fall off, there may be a steady increase in the bank balances of those same traders, the consequent gap between the assets and liabilities of the banks being filled by the advances to the Government. The result is that the banks can increase their loans to the Government by much more than they reduce their loans to traders, without disturbing the equilibrium of the money market. Money is thus being provided for the Government by traders devoting sums, which might have been used for buying commodities, not merely to paying off their own indebtedness but to accumulating liquid balances. A striking example of this tendency is to be seen in the immense quantity of paper money which France was able to digest during the war with a comparatively small disturbance of the exchanges and of prices. A similar explanation may be given for the remarkable demand for Treasury bills in England, for it was even more convenient for a merchant to hold his balance in the form of a short-dated bill than in the form of an idle bank credit. If he held a bank credit, he got no interest, or at best interest only at the low rate allowed on time deposits. If he held a Treasury bill, he got, in the form of discount, the full rate of interest on his money, and he could discount the bill at any time without loss if he needed cash.

In applying their receipts, either to pay off their indebtedness or to accumulate balances, merchants are not merely abstaining from laying out capital on purchases for business purposes, they are also abstaining from spending profits which they might use for their personal expenditure. This is a form of saving. What the merchants abstain from spending they can empower the Government to spend.

But the sums that can be raised in all these ways, like the available supply of savings, are still limited. Suppose that the Government takes full advantage of these resources and still has not enough. The exigencies of war pay no more regard to the resources of the money market than to the supply of savings. The Government goes on, day by day and week by week, incurring liabilities which are dictated by national needs. A War Loan is intended to meet the excess of those liabilities over the yield of taxes for the past and for an appreciable period into the future. If it does not, the Government *must* meet the deficiency. If temporary borrowing within prudent limits is still insufficient, the only resource left is to borrow from the banks beyond those limits. This is the point at which the stress of war begins to drive the Government to overstep the limits of sound management of currency and credit. The immediate need of the Government is for the *means of payment*. This need can be met by the creation of a banker's obligation. The banker will assume such an obligation, in return for a suitable asset. It need not be by way of a temporary loan; he may take long-term war loan stock, since he holds a certain amount of investments among his assets, and at a pinch he can add to his holding.

The usual method of temporary borrowing is the sale of obligations of the Government of a kind suitable for inclusion among the short-dated assets of a bank.[1] They would mature in three or six months or similar periods (sometimes as much as a year or even two years). They may be issued to yield a fixed rate of interest or discount, or they may be offered in the discount market, like an ordinary bill of exchange, for what they will fetch.

Up to a point the quantity sold, if insufficient, may be increased by offering the obligations at a higher and higher rate of interest or discount. But still it may fall short of requirements, and then the only remaining resource is to borrow from the Central Bank. The Central Bank can create credits in favour of the Government. These credits will be immediately drawn upon, and either transferred, as credits, to other banks, or paid away in the form of notes. The Central Bank must always be prepared to pay its own depositors in legal tender money, and *must* increase its note issue to any extent necessary for the purpose. Therefore, from the point of view of the banking community, a sum in legal tender notes and a deposit with the Central Bank are entirely equivalent to one another. The borrowing by the Government from the Central

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[1] For example, our Treasury Bills, the American Certificates of Indebtedness, the French *Bons de la Défense Nationale*.

Bank thus increases the cash reserves of the other banks, and puts them in a position to lend more. Provided trade borrowing is kept in check, this additional lending power can be directed towards meeting the necessities of the Government, and the amount of the advances from the Central Bank will then be restricted to so much as is requisite to keep up the supply of cash corresponding to the increased supply of credit. The inflationary effect will then be at the minimum.

The actual process by which the inflationary effect is produced is just the same as when it is caused by excessive trade borrowing. The whole amount borrowed by the Government may be expected to be quickly disbursed, and in being disbursed will go to swell the consumers' income and in due course the consumers' outlay.

Thus the effect of inflation is to stimulate consumption, when the necessities of war should rather dictate abstinence. It encroaches on stocks of commodities at a time when it is urgently necessary to husband the country's resources. It stimulates production only because it stimulates consumption. Traders seek to replenish their stocks, and there results pressure on the country's productive resources in disastrous competition with the needs of war. The precious foreign assets obtained by loans or by the sale of securities or gold abroad are wasted in paying for the importation of superfluous goods for consumption.

In the first instance inflation will drive gold abroad. The question soon arises whether the gold is to be let go, or whether it is to be prevented either by a suspension of gold payments or by a prohibition of export. If the inflation is serious, these measures cannot be postponed long ; the suspension of gold payments will be imposed by the complete exhaustion of the gold reserve. Parity is then lost and the gold standard is in abeyance.

Once inflation has taken effect in an increase in the consumers' outlay, the maintenance of parity by means of gold payments becomes a source of loss. It artificially increases the command of consumers over foreign-trade products. The gold could be used to better advantage before the inflation has begun. When the consumers' income and consumers' outlay are still in harmony with the volume of production, the gold reserve can supply an additional resource to the Government and postpone the resort to inflation. The gold will then buy additional supplies for the Government and not superfluities for the people.

It is equally true, and true for the same reasons, that the proceeds of loans raised abroad or securities sold abroad should be used to stave off inflation, but not to maintain parity after inflation has once begun.

When inflation has begun, the visible depreciation of the currency actually serves a useful purpose, in that it raises the prices of foreign trade products in due proportion to the consumers' outlay and prevents the artificial stimulation of demand for them.

Depreciation may be feared as a source of discredit, which would militate against borrowing abroad. But it is not to be assumed that depreciation can be avoided for longer by holding gold or foreign assets in hand, if that can only be done at the cost of starting inflation earlier. For to peg the exchanges when inflation is once afoot is like trying to fill a sieve with water. The resources employed for the purpose may easily be used up faster than if they had been applied to Government expenditure direct before the inflation began. In that case not only are they wasted on procuring superfluities for the consumer, but the moment of formal depreciation actually arrives sooner.

It is part of the inherent vice of inflationary finance that, once started, it is difficult to stop. The prices to be paid by the Government for the goods and services it needs rise almost immediately. The corresponding rise in the yield of the revenue occurs only after a considerable interval (and in part only after fresh legislation). The deficit to be covered by borrowing is thus increased.

And at the same time legitimate borrowing becomes more difficult. An expansion of credit, by increasing the profits of trade, makes investment in industrial securities more attractive than investment in gilt-edged securities. In war-time this tendency may be counteracted by appeals to patriotism and by controls of new capital issues. But patriotism, though it will outweigh self-interest in some cases, will certainly not do so in all. And controls are difficult to make fully effective, and are likely to be paralysing to business. When depreciation becomes visible, rapid and illimitable, no one will lend for any considerable period at all in a medium which has forfeited all confidence.

Thus, as soon as inflation has started, the deficit to be met by inflationary means is likely to become rapidly bigger. And deterioration will soon be frightfully accelerated by loss of confidence in the currency. When prices are rising it is more profitable to hold commodities than to hold money. People will desire to hold smaller balances than usual in comparison with their incomes or their turnover. They will pay away their money more quickly than usual, and the expansion of the consumers' income and the rise of prices will outstrip the growth of the unspent margin. In other words, the inflationary effect of Government borrowing will be more than in proportion to the quantitative addition to the means of payment.

Inflation is a deadly blight ; once it has gained a hold, it will poison the whole economic system, and can only be eliminated, if at all, at the cost of exhausting efforts. The cessation of war expenditure ought to give some hope of a recovery. But even that is not certain. The weakening of the revenue remains for a time at any rate. With the revival of the peacetime economic interests, the difficulty in the way of Government borrowing may be actually increased. Controls become more irksome, and more difficult to enforce. Even if they remain legally in force, they are likely to grow less and less effective.

With a country actually at war, the necessities of the moment are paramount, and evils likely to arise after the restoration of peace weigh little against them. But even during the war itself the consequences of inflation are disastrous. Not only is the Government's power of raising real resources, as distinguished from fictitious credits, seriously weakened, but the social consequences of rising prices are themselves a grave evil. Endeavours are usually made to combat these consequences by price controls and rationing, measures which are difficult enough to make effective and the administration of which imposes a tremendous burden on the energies of the Government at a time when they ought to be concentrated on the war itself.

It is amazing that nations at war so often acquiesce without protest or struggle in the adoption of inflationary expedients. The severe methods by which alone inflation can be avoided are unpopular. Inflation itself is popular in business circles because it brings high profits, and is recommended because it means active trade, and therefore increased production. But inflation can only increase production by increasing consumption ; it diminishes rather than increases the national resources.

In appearance the favourable balance of payments accruing to a great creditor country is an advantage, but it may easily be a snare. The favourable balance actually invites, and almost compels, inflation. As was shown in Chapter V., any circumstance which makes the balance of payments more favourable requires a credit expansion to restore equilibrium. The consumers' outlay has to be increased up to the level at which it attracts a sufficient excess of imports to redress the balance. This credit expansion has all the injurious consequences of inflation, except only that it does not make the foreign exchanges adverse. Wise statesmanship will aim at avoiding or at any rate, restricting the expansion. The result will be that the favourable balance remains uncorrected. It will be paid for (in the absence of interference) by an influx of gold, such as that which descended on the Bank of England in 1914. The influx of gold will tend to stimulate the credit expansion, and may possibly disturb neutral money markets. It can be avoided if the Government is willing to accumulate credits in neutral centres. If the war is protracted, the time is almost sure to come when these credits can be used to great advantage to procure supplies from abroad. Thus, by avoiding inflation at the beginning, the country can acquire a reserve of gold or foreign assets to be drawn on when its initial financial strength has been used up.

There is another way in which observance of the gold standard may fail to guard against inflation. When, as in the Great War, a great part of the world is at war and a number of countries start disposing of their gold reserves in order to pay for imports from neutrals, the effect is to flood the neutrals with gold. The influx provokes an expansion of credit and a rise in prices; the wealth-value of gold in world markets is lowered. There is thus inflation among the neutrals, and the belligerents are enabled to inflate their currencies to an equal extent without lapsing from gold parity. In this case also the inflation is none the less injurious because it is less visible.

CHAPTER XV.

AFTER INFLATION

ONCE started on the treacherous path of inflation, a Government will not easily stop. Sometimes help from a new financially powerful ally will enable it to recover, as the French helped the Americans in the War of Independence, and the Americans came to the rescue in the Great War. Apart from extraneous aid, the currency is likely to go from bad to worse till the financial strain of war is over.

The return of peace poses the question of a remedy. How are normal monetary conditions to be restored? War conditions in some respects mitigate, or at any rate mask, the worst effects of inflation. Inflation is essentially inflation of the consumers' outlay, and in war-time people can in various ways be limited and restricted in their expenditure. Imports can be restricted, manufactures can be restricted, capital issues can be restricted, the principal articles of consumption can be controlled and rationed, so that people can hardly find anything to do with their money except put it into war loans. Such restrictions are difficult to enforce, but under the intense preoccupation of war people will accept them, and they can be made partially effective. The tension once relaxed, the restrictions are resented, and, if retained at all, are extensively evaded.

The effect of the restrictions, so long as they are observed, is to diminish the circuit velocity of money, that is to say, with a given unspent margin to diminish the consumers' outlay. When peace brings comparative freedom to spend, people pay away money from their balances, velocity increases, and, as the unspent margin cannot be decreased unless the Government begins to pay off the floating debt, the consumers' outlay increases.

This is a critical moment. If nothing is done, the pent-up inflation will be let loose in a torrent, the currency will be discredited and prices will rise with uncontrollable rapidity. The fact that war expenditure outlasts the formal state of war for a time, probably for some months, is a source of danger. Inflation is the result of expenditure exceeding the receipts from revenue and loans. Discredit of the currency makes successful loans impossible, and this tendency is accentuated as soon as the patriotic impulses of the investor are blunted by the return of peace. Consequently *any* exceptional expenditure is a difficulty. That is one reason why heavy taxation in time of war is highly desirable, for it ensures a high yield in the opening period of peace. As much as possible of the exceptional expenditure should be met from revenue, and as little as possible left to the hazards of the investment market.

If inflation has really taken hold, a cure is almost impossible until the national budget has been balanced. It must be balanced from revenue, because loans cannot be raised ; heavy taxation and economy in expenditure are the only means of safety.

When the Government's floating debt is the principal source of credit expansion, and completely overshadows trade borrowing from the banks, the power of the Central Bank over credit is impaired, or even destroyed. The Government borrows from necessity, and cannot be deterred by a high Bank rate. Nevertheless, the continuance of inflation makes trade borrowing profitable, in that the borrower finds that the wealth-value of the monetary unit has fallen in the interval before repayment, and that what he repays is worth less than what he received. It is vital to keep this tendency in check.

Speculation in a currency is peculiarly dangerous. Speculation in a commodity, if mistaken, brings its own corrective ; those who have gone too far in anticipating a rise find themselves loaded up with redundant stocks, actual or prospective, which they cannot sell ; those who have gone too far in anticipating a fall find themselves obliged to deliver supplies which they cannot procure except at a loss. A bear account strengthens the market ; a bull account weakens it. Speculation in a currency on the contrary tends to bring about its own fulfilment. Those who expect depreciation hasten to become debtors in the depreciating medium ; if the banks consent to lend, credit is created, and the increase in the supply of bank credit brings about the depreciation expected. In the same way, the prospect of appreciation makes borrowing look unprofitable, the banks cannot induce people to borrow, the volume of bank credit shrinks, and the appreciation is brought about.

This is merely an instance of the inherent instability of credit. It occurs even when the anticipated appreciation or depreciation is small in extent, and is relative only to commodities, and not to gold or to the foreign exchanges. In that case, the speculation appears to be not in the rise or fall of the currency unit, but in the fall or rise of commodity prices ; there is a separate speculative movement in each commodity, or rather in each of those commodities which respond most to the prevalent movement of the price level. Bank advances against holdings of those commodities are increased or diminished.

When a currency is very unstable, the people speculate upon its vagaries both in relation to other currencies in the foreign exchange market, and in relation to commodities, ordinary shares, and real property. An expectation that the value of the currency unit is going to drop finds expression forthwith in a rush to buy commodities and foreign currencies, and the prices of both are forced up. On the other hand, when the value of the currency unit is expected to recover, the rush is to sell commodities and foreign currencies.

The rush to buy and the rush to sell magnify the depreciation or appreciation of the currency unit in which they originate. The price changes are so great and so rapid that action is not confined to traders and professional dealers, but the ordinary consumer takes part. The more general the movement, the more potent the consequences. That is why the collapse of a discredited currency is not a steady or continuous process, but is broken by wild and spasmodic fluctuations.

Foreign exchange rates fluctuate more easily and to a greater extent than prices, because to people who want to turn their cash into something of stable value foreign currencies are more convenient than commodities. They have the attributes of money, whereas commodities cannot be marketed without loss, except by those who make trading their business.

We saw in Chapter II. that when prices are rising profits are high, and the rate of interest which a trader is prepared to pay is correspondingly high (p. 26). What affects the rate at which the trader is prepared to borrow is his *expectation* of the future course of prices. In practice, when prices are rising, the rate of interest does not usually rise to the full extent that the price movements would justify. That is partly because, if the full rise were generally foreseen, it would be forestalled ; it would cease to be a future rise, and become a present rise.

But the immediate demand for commodities depends upon the immediate supply of the means of payment in the hands of the consumers. If speculative rises of price go beyond what the consumers can pay, goods will not be sold. Therefore when a very large increase in the supply of the means of payment is expected in the future, it may be impossible for present quotations to reflect fully the rise of prices that can be foreseen. That means an intense distrust of the currency, and traders who borrow in terms of a discredited unit, with the expectation that the value of the sum borrowed in terms of commodities will have fallen heavily by the time it has to be repaid, may be willing to pay a correspondingly high rate of interest.

In the early operations of the Russian State Bank, founded in the autumn of 1921, this situation developed, and interest was charged at 1 per cent. *a day* upon advances in Soviet roubles, while advances in gold roubles cost only 1 per cent. *a month.* A similar tendency appeared in Germany, especially for advances made expressly for the purchase of foreign currencies. Such advances were made in the autumn of 1922 at 20 per cent. a month. That apparently exorbitant rate measured the extent of the distrust felt by the public. In fact, the very same motives that led people to divest themselves of mark assets led them to incur mark liabilities. And while the dissipation of mark balances increased the rapidity of circulation, the pressure to create mark credits increased the supply of marks; both tendencies aggravated the depreciation.

Eventually, when the collapse of the currency reached its climax in October and November, 1923, the rate of interest on loans in marks rose to 5, 10, or even 20 per cent. per diem.

Under such conditions it may be quite impossible to check borrowing by any Bank rate that does not look exorbitant (the rate of 108 per cent. charged in Berlin in 1923 was quite inadequate), and the best plan may be a rationing of credit, such as Dr. Schacht instituted at the Reichsbank in April, 1924.

Even if trade borrowing of this type is kept in check, speculation is still likely to introduce incalculable vagaries into the value of the currency unit. Discredit will culminate from time to time in a "flight" from the currency; people will seek to pay away their cash balances in exchange for "real" values, that is to say, for goods and foreign currencies not dependent for their value on the currency unit itself. But so long as the total amount of balances, the unspent margin, remains undiminished, one man can only get rid of his superfluous cash by unloading it on another. The effect is to increase circuit velocity. The unspent margin remains unchanged, and the consumers' outlay expands. Stocks of commodities are depleted, and prices rise. Production is stimulated (as it would be under normal conditions, by a more moderate credit expansion), and there arises that form of trade activity which has been called a "catastrophe boom."

Provided the creation of credit (and of paper currency) through fresh borrowing is prevented, this form of speculation, like speculation in a commodity, will, if carried to excess, provoke a reaction. Distrust will lead people to reduce their cash balances below their real requirements, or, more accurately, will swell the consumers' outlay beyond its due proportion to the unspent margin. Those who need more money, if they cannot borrow, will have to sell some of their precious "real" values; prices will begin to fall, and the flight from the currency will be suddenly succeeded by a recovery.

If, however, the Government is still meeting a deficit by the creation of bank credits and paper money, the recovery will be transitory. Caused, as it is, by a momentary shortage of the means of payment, the rise in the value of the currency unit will not induce that confidence in the future which would reopen the investment market to Government loans. If redundant supplies of money are let loose on the market again, discredit will quickly regain the upper hand, and a renewed flight from the currency will ensue.

A flight from the currency is usually accompanied by a slightly different phenomenon, which may be distinguished as a "flight of capital." The same discredit which attaches to holdings of money attaches also to investments of which the interest and principal are fixed in money. People seek to sell such investments and to acquire in their place either ordinary shares of which the dividends may be expected to increase in proportion as the currency depreciates, or else securities denominated in some stable foreign currency. But the flight of capital soon encounters an obstacle in the difficulty of finding buyers for the discredited investments. These investments not only suffer the depreciation which anyhow affects the currency unit in which interest and principal are expressed, but their market value is subject, in addition, to a capital depreciation to allow for the probability of a further loss of value in the future. In 1926 French Government securities could be bought to yield 10 per cent. When discredit reaches a certain pitch long-term securities become unsaleable, and the flight of capital in this form is completely stopped.

If the Government has succeeded in making ends meet, so that it need no longer resort to the creation of credit and paper money, and if the Central Bank takes adequate measures to prevent any increase in trade borrowing, there is no reason why a temporary recovery in the currency should not turn into a more permanent condition of approximate stability. A flight from the currency might be started, perhaps by some political scare, but in the absence of any means of increasing the unspent margin, a shortage of currency would soon assert itself and bring about a renewed recovery. Moreover, so long as the currency is discredited, the unspent margin bears less than the normal proportion to the consumers' outlay, and this is still so even during the periods of temporary recovery; the proportion then increases because balances have been reduced below the indispensable minimum, but it does not increase to the *convenient* level.

If the unspent margin be kept constant, the consumers' outlay may be expected therefore to fall until velocity is normal, and prices will fall in the same proportion. The unspent margin having been swollen by inflation, this process will, by itself, leave the price level higher, and the wealth-value of the currency unit lower, than before the inflation. If the unit is to be raised to a still higher value, a further contraction of credit will be necessary, and this will probably necessitate the liquidation of a part at any rate of the Government debt from which the inflation originally proceeded.

Thus the path of deflation is open by way of a balanced budget, repayment of floating debt, and restriction of credit.

Is it necessary, is it desirable to travel along this path? And if so, how far? The Old Guard of the Classical School would say it is necessary and it is desirable to travel all the way; the pre-existing metallic value of the currency must be restored at all costs.

When, without the excuse of a war, a country lapses from parity, it can recover by way of an ordinary credit contraction, but must pay the price in the form of a depression of trade. The case we are considering is different, in that the credit contraction is effected mainly, perhaps exclusively, by the repayment of the Government's indebtedness to the banks. But that difference does not materially alter the character of the depression. The cancellation of this Government indebtedness contracts the consumers' outlay in much the same way as the cancellation of an equal amount of trade indebtedness.

While the process of inflation is going on, the Government has the advantage of spending money without the trouble of raising it ; when the process is reversed, the Government has the trouble of raising the money without the advantage of spending it. As the Red Queen said to Alice, it takes all the running you can do to keep in the same place.

The Government must raise the money either by taxation or by borrowing, and the borrowing must be genuine ; it must draw upon the available stock of savings, and, like the taxation, diminish the amount of the consumers' outlay in other directions. The portion of the consumers' outlay so taken by the Government vanishes like a stream which loses itself in the desert, and what remains thereupon becomes the measure of the consumers' income, to suffer further diminution in turn. Demand flags, stocks accumulate, orders to producers are curtailed, production slackens, profits shrink, unemployment supervenes.

The depression does not differ in kind from that which is incidental to the familiar trade cycle, or from that which a country has to face when it has lapsed from gold parity through some miscalculation or some economic misfortune, and seeks to return. But though it does not differ in *kind*, the depression may differ vitally in *degree*. It is serious enough to have to face a fall in the price level of, say, one-fifth, and on occasions when the trade cycle has involved so considerable a contraction, the process has been spread over several years of tribulation. But we are supposing that a country has lost control over its currency, and that the consequent depreciation has been gathering impetus during a period of strain which may have been protracted for years. If prices have been no more than doubled, the disorder may be called mild.

Now, if a given extent of credit contraction has to be gone through, the more quickly it is done and done with, the less will be the total loss of production and employment. The curtailment of production originates in the decline of demand, which leads the dealers in commodities to withhold orders. To the dealer the essential point is that the decline of demand portends a fall of prices ; if he orders fresh supplies before the fall of prices has materialised, he will suffer loss. If the decline in demand is rapid, the response of prices will likewise be rapid. When the desired fall of prices has been completely accomplished, the dealers' motive for restricting orders will have been removed. In order that the prices quoted by the producers to the merchants may be reduced in the same proportion as the prices quoted by the merchants to retailers, it is essential that costs, especially wages, be reduced. But it may well be easier to make a single very large reduction in wages concurrently with a corresponding reduction in prices, than to bring wages down by a prolonged and intermittent pressure that seems to have no finality. During the critical interval of adjustment there will certainly be grave friction and unemployment, but not so much more grave than during gradual deflation as to outweigh the gain of getting through the process in, say, six months instead of six years.

On the other hand, the obstacles in the way of rapid deflation may be insurmountable. We have supposed the Government to effect deflation by repayment of floating debt (or other debt held by the Central Bank and other banks) while trade borrowing is restricted by a high discount rate and other measures. The funds the Government must raise for this purpose are a burden upon the taxpayer. Inflation we are supposing to have arisen because the Government could not make ends meet, and to have been ended by a great fiscal effort by which the budget is balanced. Deflation requires a *still greater* fiscal effort. And as depression spreads, the yield of taxes falls off. To some extent Government expenditure will also fall off, but the debt charges, which after such events will be a great part of the whole, are fixed in terms of the currency unit.

If taxation cannot furnish sufficient resources, it may be that they can be raised by funding loans, provided confidence has been restored in the investment market. But that means that the floating debt, instead of being redeemed, will be replaced by an equivalent amount of long-term debt. The budget problem is only deferred till after the deflation, and the danger will then arise of the fiscal machine breaking down, and a new bout of inflation setting in, bringing with it a desperate forfeiture of confidence.

The budget difficulty is traceable to the effect of deflation in enhancing the burden of debts. This effect is not confined to the Government. Every debtor whose debts have been incurred during the inflationary period will suffer from it. The trader carrying part of his stock-in-trade with borrowed money finds the value of the goods falling precipitately while the amount of his indebtedness remains unchanged. That is the situation which provokes a crisis.

It is possible that in the exceptional circumstances of the inflation the amount of temporary borrowing by traders has been reduced to vanishing point. In the first place, the inflationary borrowing of the Government tends to crowd out trade borrowing. Secondly, after active inflation has ceased, the currency becomes very unstable, and yet has no clearly predominant tendency to depreciate further. Borrowing is then attractive only to speculators, and traders will endeavour to avoid it. It may happen that the country is left proof against crises ; it has been, as it were, inoculated ; the Government is the only debtor of any importance, and there are practically no trade debts for the crisis bacillus to feed on. The same result may be seen when invasion has dislocated business, as in France in 1814.

If the volume of trade indebtedness is small, the difficulties in the way of rapid deflation are much diminished. If the national debt, or at any rate so much of it as is denominated in the country's own currency, is moderate, the policy is quite practicable. A country in such a position may borrow abroad the funds needed to redeem the floating debt. Its obligations in foreign currencies are not affected by deflation ; for as fast as the nominal yield of the revenue is diminished by the fall in the consumers' income, the value of the currency unit in the foreign exchange market is raised, and the yield of the revenue in terms of foreign currencies remains undiminished.

If adequate provision can be made for redeeming a large part of the paper currency (perhaps with the proceeds of foreign loans), the whole process of deflation may be effected by a stroke of the pen. Unless the depreciation to be corrected is slight, the dislocation caused by such a discontinuous change is likely to be prohibitive. Even if the volume of indebtedness remaining over from the period of depreciation is small, the hardship to debtors is still intolerable. Nor can it be taken for granted that the requisite adjustment in wages, prices, and salaries in proportion to the change in the wealth value of the currency unit can be effected instantaneously and without friction.

It will be seen, therefore, that the case where rapid deflation is practicable is exceptional. But it cannot be taken for granted that the alternative of a protracted deflation is possible, even if the country is prepared to face a long-drawn-out trade depression. To halve the price level is to double the burden of debts, and is likely to bring the economic system near breaking-point. But suppose the burden of debts has to be increased tenfold. It is quite obvious that at some stage the restoration of the currency unit to its previous wealth value becomes absolutely impossible, without some breach in the continuity of debts.

When a currency is irremediably discredited, it sometimes happens that the old metallic standard is reintroduced at a stroke, either by legislation, or by people taking the law into their own hands and stipulating in their bargains for payment in specie or in equivalent values. A new customary money of account is thus established, independent of the existing legal tender. Debts incurred in discredited paper money cannot be suddenly made payable in the restored unit, which may be worth a hundred or a million times as much as the paper unit. Either the debts must remain payable in the depreciated paper and must vanish along with it, or provision must be made by special legislation to give creditors an equitable composition. We shall see that more than once in the past legislation has been undertaken to scale down debts in this way according to the degree of depreciation that prevailed when each debt was incurred (see below, pp. 315-16, 353 and 371).

The complication of such a settlement is very great, and in the monetary upheaval of recent years it has not been attempted. In Germany, after the old reichsmark had dwindled to something more ridiculous than zero, and was replaced by the new mark at the ratio of a billion to one, long-term creditors, such as debenture holders and mortgagees, were given a small fraction of their former rights, but there was no systematic recalculation of debts.

A far more usual plan is that of devaluation. The currency unit is given a new gold value approximating to the existing market value or, at any rate, not so far above the existing value as to make the practicability of its retention doubtful. The unit preserves its identity, in that all debts remain nominally unchanged ; they represent the same number of units as before. The devaluation measure merely prescribes the amount of gold to which these units are to be equivalent.

The rights and wrongs of devaluation have long been the subject of persistently recurrent controversy. It is constantly denounced as a fraud upon creditors. Debtors, it is said, who undertook to pay a certain amount of gold are let off with less ; they are allowed to default upon their engagements.

But this is a misconception of the nature of a debt. When a contract gives rise to a pecuniary obligation, the medium of payment is not part of the contract. The law prescribes the medium which either party may insist on if he chooses. The medium is a creation of the law, and no one has any right to assume that the law will not be altered. In the Middle Ages repeated alterations were familiar to every country, and they have been common enough in modern times.

Undoubtedly there are grounds of *expediency* for avoiding arbitrary or discontinuous changes in the standard. But when a change has *already occurred*, as when inflationary war finance has depreciated the unit, a return to the old standard is itself another change. The depreciation was detrimental ; it threw unmerited loss on creditors. But a return to the old value will also be detrimental ; it will throw unmerited loss on debtors. The debtors who lose and the creditors who gain will only be in comparatively few instances the same as the debtors who gained and the creditors who lost before. Against the justice done in some cases will be a new injustice done in others, and there may be no net gain of justice to set against the dislocation and distress caused.

And the debtors suffer more from a rise in the value of the monetary unit than the creditors from a fall. So far as short-term indebtedness goes, the creditors are mainly bankers, whose assets and liabilities are both expressed in the money of account. The wealth-value of their profits and of their capital and reserves may be diminished if the monetary unit is depreciated. At the worst they suffer some loss. But, on the other hand, when the value of the monetary unit is raised, traders are threatened not merely with loss but with ruin, and incidentally this may do serious injury to their creditors.

The real loss falls on the long-term creditors, the holders of debentures and other fixed interest-yielding securities. A great part of these securities will have been created before the depreciation occurred. To perpetuate the depreciation is to revise the contract in favour of the debtor. The temporary loss of real income, due to the depreciation which lasts during the financial strain of a war, is a minor evil which the investor can put up with. A permanent reduction of the purchasing power of his income is a much more serious matter. So long as society depends on voluntary investment for its supply of capital, an attack upon the purchasing power of interest is dangerous. It must be remembered that what the debenture holder loses is gained not by labour, but by the *shareholder*, whose dividends are swollen by the residual profits. A revision of the standard of value introduces a capricious element into the investment of capital, and especially threatens the class of non-speculative investors who play so considerable a part as the sleeping partners of the modern capitalist system. How far this is contrary to the material interests of society is a subject on which much might be said ; that it is an injustice so long as the capitalist system continues seems unquestionable.

But there is one class of investor which is in an altogether special position, more particularly in post-war finance. That is the holder of the national debt.

There is no need to enlarge upon the invidious position of a State which has to decree in what unit of value its own debts are to be calculated. Of course, debts may be made expressly payable in gold or in foreign currency. In that case the difficulty does not arise. It did not arise in the United States after the Civil War, or at any rate after it was agreed once and for all that the Civil War debt was a gold debt. But what is to be done in a case where the national debt is payable in the national currency, and the basis of the national currency is to be altered? It may be said that, whatever is done in the case of private debts, the national debt ought to be made payable in whatever metallic standard was in operation when it was incurred. If the gold unit of currency is reduced, the interest and principal of the debt must be paid in the old unit. But this is to give the stockholders more than they bargained for. When they invested, it was with no idea of claiming a preference over other investors, and to give them an uncovenanted benefit is an injustice to these latter, who have to pay taxes towards meeting the cost of it. If the national debt holders possess this right, it ought to have been made clear at the time when they subscribed to the loans; for then the State could have had the advantage of getting favourable terms for what would have been a gold loan. It would be dishonourable to alter the standard for the purpose of lightening the burden of the national debt. But if the standard is to be altered on general economic grounds, is it not irrational to give the national creditor a privileged position merely in order to save the appearance of arbitrariness? And if, as is very probable, the greater part of the debt has been incurred when inflation was in progress, is it not a departure from all reason and justice to select the national creditors of all others to be repaid in the old standard? The pre-war debenture holder in a trading concern, who lent money of the old standard, is to receive interest and principal in money of the new. His neighbour, who lent the Government depreciated paper, is to be singled out to receive payment in the old standard.

But, after all, the most powerful argument to be urged in support of the inclusion of the national debt within the operation of a new and depreciated monetary standard is that otherwise the strain may be greater than the country can bear. If the Government finances can only be carried on by means of fresh inflation, the attempt to restore the metallic standard, even by a cutting of the knot, will fail, and in the end the public creditor will only be paid in paper.

If nations make great sacrifices to restore their currencies and to avoid devaluation, that is on grounds not of abstract justice but of practical expediency. It is of the first importance in commercial and financial business that people should feel confidence in the currency unit. If there is a long-established standard, and if great and successful efforts have been made to return to it when it has been departed from, people will believe that it will be adhered to except in the face of over-powering difficulties. If, on the other hand, a new standard has been set up, there is no reason why it in turn should not be abandoned in favour of yet another at the first pressure.

Confidence in the currency facilitates all ordinary financial transactions, and without it long-term borrowing becomes almost impossible, either for public authorities or for trading concerns. Confidence, for this purpose, means confidence in the maintenance of gold parity. Gold retains (or has regained) its position as the international standard, and gold parity therefore means substantially parity with all the principal currencies of the world. This is particularly important for a country like England, which is a great financial centre.[1]

When devaluation has been decided on, the selection of a new gold value is beset with difficulties. The guidance afforded by the foreign exchange market may be deceptive; the quotations are liable to be swept up and down by gusts of speculation. The operations of the speculators bring about an over-valuation or under-valuation of the currency, which disturbs the balance of payments. The speculators back their opinion by supplying the means of making good the favourable or unfavourable balance for a time, and it is never possible to say that there is equilibrium in the balance of payments, nor, therefore, that there is equilibrium in the price levels of home-trade and foreign-trade products. Under those conditions the speculation in the commodity markets is likely to be only one degree less active than in the foreign exchange markets. Prices will display the same sort of vagaries as rates of exchange. When the currency unit is fixed in gold, the speculative element must be eliminated wherever it exists, and the result will be big and chaotic price movements. Probably the best solution is to aim at a gold value which will correspond as nearly as may be with the existing level of *wages*, though, if, as is not unlikely, wages have lagged far behind the inflationary rise of commodity prices, it may be better to leave some room for an increase of wages, rather than bring about a precipitate fall of prices.

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[1] See my *Monetary Reconstruction* (2nd edition), pp. 169-70.

It was pointed out above (p. 252) that in a war of great extent the displacement of gold from circulation by paper money may reduce the wealth-value of gold in world markets. Neutral countries will be flooded with gold and will experience a credit expansion and a rise of prices. The return to peace conditions is likely to have complicated reactions on the value of gold.

After the orgy of inflation various currency policies are possible, and even when the policy of any particular country is selected, its absorption of gold may vary within wide limits. Gold coin may be put into active circulation ; paper money may be used with a gold reserve, large or small ; the gold exchange standard can be adapted to dispense with a metallic reserve altogether. The absorption of gold for monetary purposes is everywhere capable of almost unlimited variations. And the world value of gold depends upon the absorption of gold.

If all countries returned to their former currency systems, to the extent of keeping the same proportion of their monetary circulation in gold as before the war to which the whole disturbance has been assumed to be attributable, the wealth-value of gold would return approximately to its former level —approximately, and not necessarily exactly, because there may have been far-reaching changes in some countries in the conditions affecting the relation between the unspent margin and the price level. On the other hand, if an extended use of paper money is perpetuated after the war, and some countries hold much less gold in proportion to circulation, other countries will have to absorb more. The probability is that in that case gold will be permanently cheapened.

To those carrying out any measure of currency reform based on the gold standard, whether deflation or devaluation, variations in the wealth-value of gold will be a matter of very serious concern. The effort involved and the dislocation to be encountered depend on the wealth-value to be assigned to the currency unit. If the unit is fixed in gold and the wealth-value of gold changes, the effort and the dislocation will have been to that extent miscalculated. When we come to the historical illustrations in Part II., we shall find numerous examples of paper currencies being affected by changes in the wealth-value of gold.

These changes are the resultant of the currency policies of all the different gold-using countries. Changes in the supply of new gold from the mines or in the industrial demand are insignificant (except over long periods) in comparison with changes in the monetary demand. It is emphatically the interest of each country that the value of gold should be as stable as possible, and seeing that the interest of each country depends upon the action of all the rest, and that their action is free to vary within such wide limits, it is clear that what is wanted is some sort of international co-operation.

The idea of international co-operation in currency policy was mooted in connection with the bimetallic controversy a generation ago. It was then hoped to recreate the monetary demand for silver and restore its value to the former relation to that of gold. The bimetallists' case depended upon the power of currency authorities, in virtue of the predominance of monetary demand, to determine the value of the precious metals in world markets, but they proposed to use that power not to regulate the wealth-value of gold or silver, but to regulate the gold value of silver.

At that time variations in the wealth-value of gold were beginning to be clearly recognised. But the deliberate regulation and prevention of these variations was brought for the first time within the region of practical politics by the Genoa Conference in 1922. The unprecedented extent and rapidity of the variations in the value of gold in the years immediately following the war threatened to make chaos of any plan of currency reform. The resolutions passed at Genoa recommended co-operation by the Central Banks of issue of the world in the regulation of credit with a view to preventing undue fluctuations in the purchasing power of gold. There was no representation of the United States at Genoa, but the policy of the Federal Reserve Banks since 1922 has, in fact, been directed to the ideal of stabilisation.

The question of stabilising the wealth-value of gold has been brought into prominence by the exigencies of post-war reconstruction. But it has more than a transitional importance. It promises a cure for the cyclical fluctuations of trade to which are attributable those recurrent epidemics of depression and unemployment which were so conspicuous a feature of the economic system of the world between the Napoleonic Wars and the Great War.

One other form of currency disturbance arising out of a great war remains to be considered. Among the after-effects of war there are apt to be vast international obligations and capital movements, which disturb the balance of payments and are bound to put a strain on the foreign exchange market. These obligations may arise out of loans raised by a country when at war from neutrals or allies, or they may be indemnities or reparations due from the defeated combatant to the conqueror.

A *single* payment which is, in itself, large in comparison with the turnover of the foreign exchange market causes no problem if it can be raised in the international investment market, and the annual debt charges are a manageable amount. The indemnity paid by France to Germany in 1871-

1872 was mainly provided by external borrowing on the part of France, and did not overstrain the exchange market.

The international obligations which have given so much trouble since the Great War have been of such magnitude that, even if they were funded, the *annual* charges for interest and sinking fund have been thought to be too much for the market to bear.

Suppose that a country is endeavouring to meet an external obligation, and suppose that the annual charges involved are large in relation to its exporting power. What will be the effect on the foreign exchanges?

The case must be distinguished from that of an obligation which strains the country's *taxing* power. A break-down of the budget may lead to inflationary finance. Depreciation may be swifter if new paper money is flung blindly at the foreign exchange market than if it is used in the first instance for internal payments, but there is no difference in principle between the effects of inflation in the two cases. The German collapse in 1921-23 was caused by an inflationary budget, not by inadequate exporting power.

What we have to assume is that, in the first instance at any rate, the external payments are budgeted for, and that the strain falls on the foreign exchanges. By tax or loan there is withdrawn from the public an amount of income equivalent to the foreign payments to be made. The consumers' outlay is diminished by that amount. The Government proceeds to apply the money so raised to the purchase of exchange.

The new balance of payments will require a new equilibrium between the internal and external price levels. The curtailment of the consumers' outlay will be divided between home-trade products and foreign-trade products, and there will follow the reactions which were shown in Chapter V. to result from any unfavourable change in the balance of payments.

If we suppose a gold standard to exist and to be maintained, equilibrium will require a *further* compression of the consumers' outlay such that the reduction in outlay on foreign-trade products alone becomes sufficient to cover the external payments.

This further compression involves fresh efforts in two distinct directions. In the first place, a contraction of credit is required to reduce the internal price level, involving, till the process is completed, a depression of trade accompanied by unemployment. And secondly, the taxable capacity of the country (expressed in money units) is reduced, so that the fiscal measures originally estimated to produce the requisite revenue become insufficient.

If the gold standard be abandoned, and the currency allowed to depreciate, the contraction of credit and trade depression are escaped. But the budget difficulty remains. The revenue previously sufficient is made insufficient by the depreciation of the money units in which it is reckoned in comparison with the foreign units in which the external payments are reckoned.

The extent of the credit contraction that the country can stand is likely to be limited ; in so far as it falls short of what is required there will be an outflow of gold. It may be assumed that, if the strain on the balance of payments is really excessive, the gold standard must be abandoned and some depreciation allowed.

The depreciation raises the cost of foreign-trade products to the consumer. Imports are diminished, and goods are diverted from the home market to export. And as we are considering a permanent or long-period change in the balance of payments, we must take account of further adjustments. The production of foreign-trade products becomes more profitable than before, and capital and labour tend to be diverted from home-trade products to them. This is equally so even when the gold standard is maintained, for in that case internal prices have to fall, and wages must fall with them. The cost of production of foreign-trade products is thus in either alternative diminished.

It will be seen, therefore, that there will be a gradual adaptation to the new balance of payments. It may be that the external payments required exceed the country's capacity in the first instance, but can ultimately be met. A respite may be essential; either there should be a gradually growing scale of liabilities, or the debtor country should cover a part of the earlier payments by borrowing abroad.

In case of a break-down there will be heavy depreciation of the currency without any rise or any equivalent rise in the internal price level. There will, in effect, be an inordinate premium on exports.

World prices may be little affected. If the increase in output of any product by the debtor country is small in comparison with world production, the producers can readily dispose of it at world prices and realise a handsome profit. Unless there is a break-down in commodity markets (which could not be indefinitely prolonged), there is no reason why they should take less.

Some product may be exceptional, in that the export premium may evoke additional output which is considerable in relation to world production, or at any rate cannot be absorbed by world demand except at the cost of heavy reductions of price. This might most easily come about in an industry which happens at the moment to be depressed, and in which the producers are everywhere under-employed. It is possible for the producers in the debtor country, with low prime costs, to extend production up to capacity and cut out their rivals.

But if the debtor country could readily extend production in *many* export or import industries, there would be no exchange depreciation at all. In such conditions it would certainly be taxable capacity, not the foreign exchange market, which would impose a limit on external payments.

It is often supposed that, when the foreign exchange position of a debtor country collapses, it is the creditor countries that suffer from the competition of the debtor. That is a misconception. A creditor country must adapt its internal and external price levels to the favourable change in its balance of payments; it must develop an import surplus. But this import surplus will not, in general, represent increased competition in its markets.

The debtor country's payments represent to the creditor country an increase in the consumers' income. If the payments are made direct to the Government of the creditor country, the increase would presumably take the form of lighter taxation. The consumers' outlay is correspondingly increased, and the additional demand is applied partly to foreign-trade products and partly to home trade products. To secure equilibrium the consumers' outlay must increase further, up to the point at which the part applied to foreign-trade products is equal to the whole of the requisite import surplus. This will necessitate an expansion of credit, which will be brought about, if not otherwise, by imports of gold.

The import surplus only comes to satisfy an *additional* effective demand for goods; room is made for it without encroaching on the market for other products. Indeed, the additional demand is more than sufficient to pay for the import surplus; it has to provide also for a rise in the price level of home-trade products.

The exchange problems of the creditor country are exactly the reverse of those of the debtor country. In the debtor country *depression* in the market for home-trade products diverts productive resources to foreign-trade products; in the creditor country *expansion* in the market for home-trade products attracts productive resources to them from foreign-trade products. The conspicuous contrast between the two is that the debtor country can only sustain the exchange value of its currency unit by an effort, while the creditor country enjoys the advantage of letting credit expand without the exchange value of its unit suffering. The advantage is an equivocal one, as is illustrated by the inflation in Germany, which accompanied the payment of the French indemnity after 1871. But the dangers which threaten the creditor country are the exact reverse of those of a trade depression. It is the debtor country which suffers from depression.

If, for a moment, we return to world markets, we can now see that against the export surplus of the debtor country as a depressing influence upon world markets must be set the contrary influence of the import surplus of the creditor country.

The import surplus will not provide demand for precisely the goods composing the export surplus, but if some markets are depressed by excessive supplies, others will be stimulated by increased demand.

It must be borne in mind that an export surplus is not necessarily composed of additional exports. Originating, as it does, from a reduction in the consumers' outlay, it will mainly take the form of a shrinkage of imports. Imports are less specialised than exports, and it may well be that the additional imports acquired by the creditor country do not differ much from those dispensed with by the debtor.

In considering what external payment a country is capable of making, the first thing to turn to is its total consumption of foreign-trade products. If it is an exporter of capital, its annual external investments must be regarded as foreign-trade products for this purpose. A payment which looks formidable in comparison with the total of exports or of imports, may yet be a very moderate fraction of the total of foreign-trade products consumed, including, on the one side, all the products of the exporting industries which are consumed at home and on the other all the products of the importing industries which are produced at home. To take hypothetical figures for the purposes of illustration, if the national income of Germany is 60 milliards of marks, and three-fifths of it, or 36 milliards, are spent on foreign-trade products (including nearly all the transportable products of agriculture, of mining and of industry), the restriction to be effected in the latter figure to provide for the maximum payments of 2½ milliards a year under the Dawes Plan would be no more than 7 per cent. The consumption to be thus restricted would be spread over all the foreign-trade products to which Germans apply their incomes, and that means very nearly all the products which enter into international trade anywhere. This calculation allows nothing for any transference of productive power from home-trade products to foreign-trade products.

It is not in highly commercialised countries like Germany, France, or England that external payments find their limit in the foreign exchange market. It is in those where wealth is insufficiently mobile owing to inefficient communications or inadequate mercantile organisation. The failure of Poland to maintain her stabilised currency in 1925, when her balance of payments was upset by the cessation of her foreign borrowing, is a typical case.

Exaggerated views of the effect of external payments on the currency have prevailed in recent years because the effect of inflation on the exchanges has not been clearly distinguished from the effect of an adverse balance of payments.

PART II.

HISTORICAL ILLUSTRATIONS.

CHAPTER XVI.

THE SILVER RECOINAGES IN ENGLAND.

In the Middle Ages the movements of specie from one country to another were caused, just as they are in modern times, by the need to discharge liabilities not covered by the balance of trade. But whereas nowadays the loss of gold is a signal for a contraction of credit, which should restore equilibrium, this resource did not then exist. If production in a country fell off, so that it had less to sell abroad, and if there were no immediate counteracting decrease of consumption, it would begin to lose its money. It is easy to say that according to economic law this loss of money ought to make the money which remained more valuable; that is to say, ought to bring about a fall of prices. But prices did not respond so easily as they do now. Not only prices but wages were often narrowly prescribed by custom or even by law. Difficulties and delays of communication made the creation of a world market, with approximately simultaneous changes in quotations, an impossibility. The consequence was that a country would sometimes be exposed for years together to a steady drain of gold and silver, till the scarcity of money began to cause great inconvenience. And a special complication was that, in accordance with Gresham's law, the best coins were always taken for export. Before the introduction of modern systems of coinage, coins were apt to issue from the Mint of very unequal weight. If gold or silver was wanted for export, the heaviest and least worn coins were selected. When there was so serious a disturbance of the equilibrium of trade as to cause a prolonged drain of money, it was found not only that currency had become very scarce, but that what was left was made up of coins which, on account of wear, clipping, or errors of manufacture, were materially below the nominal weight. This situation occurred again and again in all countries, and the remedy was usually found in a reduction of the weight of the standard coin. In fact, prices and wages being too rigid to yield to the altered condition of markets, the value of the unit in which they were reckoned was reduced. The monetary unit refusing to rise, legal recognition was given to its fall.

Many, perhaps the majority, of the mediæval debasements of the coinage in Europe were caused in this way. Some debasements, like those in France during the Hundred Years War, or in England under Henry VIII. and Edward VI., were impudent attempts to gain illicit profits from coinage, or to reduce the burden of the King's debts without an avowed bankruptcy. But there was nothing dishonest about the debasements which were effected to keep money in the country; and in mediæval conditions, with wages and prices to a great extent stereotyped, such debasements were by no means invariably ill-judged. Of all countries England was the freest from illegitimate debasements. The following table shows the successive alterations of the weight of the silver coins (silver, not gold, being the standard) :—

Year.	Value of Tower Pound ($11\frac{1}{4}$ ozs. Troy).	Weight of Penny in Grains.	Percentage of Debasement.
Original Standard	20s.	$22\frac{1}{2}$	—
1299	20s. 3d.	$22\frac{2}{9}$	$1\frac{1}{4}$ per cent.
1343	22s. 2d.	$20\frac{3}{10}$	$8\frac{2}{3}$,,
1346	22s. 6d.	20	$1\frac{1}{2}$,,
1351	25s.	18	10 ,,
1411	30s.	15	$16\frac{2}{3}$,,
1464	37s. 6d.	12	20 ,,
1526	42s. $2\frac{1}{4}$d.[1]	$10\frac{2}{3}$	$11\frac{1}{9}$,,

The debasements may be regarded as a device for meeting the difficulties caused by the persistent rise in the value of silver. Till the discovery of America there was no adequate fresh supply from the world's mines. The use of a standard of value which is perpetually appreciating hampers business. It increases the burden of debts, and if money wages cannot be reduced *pari passu* with the rise in the purchasing power of money it increases the cost of production. The rise of real wages may not even be in the interest of the wage-earners themselves, if it diminishes employment. So long as these conditions obtained, the tendency was to acquiesce in a depreciation once it was an accomplished fact, and to scale down prices and wages, in relation to silver, by means of a debasement, whenever there was an excessive outflow of money.

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[1] I.e. 45s. the pound Troy of 12 oz.

After a period of illegitimate debasement, on the other hand, the common practice was to return towards the old standard of value, though often it was not fully restored. In 1543 Henry VIII., faced with the expenses of a war against France and Scotland, initiated a period of debased coinage, the only really flagrant debasement in our history. At first the debasement was slight. The *weight* of the coins was only diminished by $\frac{1}{16}$, the pound Troy being coined into 48s. instead of 45s., but the ominous feature of the measure was that the standard of fineness, which had been maintained at $\frac{37}{40}$ for nearly five centuries, was reduced to $\frac{5}{6}$. As the Mint price of silver of the new standard was fixed at 40s. a pound, equivalent to 48s. a pound of fine silver, the King reaped the whole profit arising from the reduction of fineness and weight. As the seignorage had previously been only 1s. a pound, the Mint price had been 44s. a pound of the old sterling standard, and this was very nearly equivalent to 48s. a pound of fine silver. So long as the Mint price of silver was kept down, that was a sign that the monetary unit was not depreciated. But then the old coins would remain in circulation; the new coinage would be limited and the profit correspondingly small.

The war was prolonged for three years and carried on in Henry VIII.'s characteristically extravagant manner, costing in all £2,135,000.[1] Tudor autocracy could not be maintained without some degree of financial independence of Parliament.

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[1] Burgon, *Life of Sir Thomas Gresham*, Appendix IV.

Henry could not impose on himself the parsimony which was so characteristic of his father and his daughter, and, the spoils of the monasteries being dissipated, he involved himself deeper and deeper in the debasement of the coinage. In 1544 a new coinage was commenced one-half fine, and the Mint price raised to 56s. a pound, fine, and in the following year the fineness was reduced to one-third. The King, as Sir John Rainsford said, had been made "with a red and copper nose,"[1] for the alloy, being double the amount of the silver, gave its colour to the coin. With the Mint price at 56s. it became profitable to melt down all the silver coined before 1543.

In 1547 the death of Henry VIII. left the burden of government and his financial embarrassments to a regency under the presidency of the Duke of Somerset with the title of Protector, the new King Edward VI. being hardly ten years old. The first Mint indenture of the new reign continued the same standard of 48s. to the pound, one-third fine, but the Mint price was raised to 60s. the pound fine. This price, equivalent to 55s. 6d. for a pound of the old sterling standard, is evidence of a depreciation of 20 per cent. in the metal value of the money of account since 1543. It was now profitable to melt down the coins $\frac{5}{6}$ fine of 1543. The financial difficulties were intensified by a recrudescence of the war with Scotland and France.[2] In 1549, perhaps in order to tone down the King's red and copper nose, the fineness was increased to one-half, and the weight reduced by one-third, so as to make the silver contents of the coins the same as before. Since 1545 the shilling had weighed 120 grains and contained 40 grains of silver; now it was to weigh 80 grains only and still to contain 40 grains of silver. The Mint price of silver, however, was raised to 64s. per pound fine.

The autumn of 1549 saw the fall of Somerset, but the new Protector, the Duke of Northumberland, did not make any immediate improvement. Indeed, in 1551, though peace had been restored in 1550, and attention was already turning towards a reform of the coinage, an even more debased issue was resorted to. The weight remained the same, a pound being coined into 72s., but the fineness was reduced to one-fourth. Silver was to be bought by the Mint at 10s. per oz. fine, being a depreciation of 60 per cent. as compared with the price of 48s. a pound prescribed in 1543. But this coinage differed from the rest in being *limited in amount.* It was to be no more than sufficient to provide a profit of £160,000,[1] and subsequently it was decided to be content with £80,000 to pay the King's debts and £40,000 for the fortifications of Calais and Berwick. It appears that the Protector hoped by this last debauch to restore financial equilibrium as a preliminary to a return to sobriety. If the Mint price really represented the conditions of the bullion market, it was high time for this return. But it was obvious that a further issue of debased currency, however strictly limited in amount, could not but cause a further depreciation.

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[1] Ruding, *Annals of the Coinage*, vol. ii., p. 440.

[2] Edward VI.'s war expenditure amounted to £1,356,000.

At the very moment when this last issue was being authorised the first step towards a restoration of the standard was actually taken in a proclamation dated the 30th April reducing the current value of all the debased coins by 25 per cent., so that the teston or shilling was to discharge a debt of ninepence only. A more incongruous series of financial measures there could hardly be. Confidence was at an end, and, doubtless with a view to facilitating the absorption of the new issue of coins, one-fourth fine, a proclamation was issued in July inflicting savage penalties on any who should "invent, speak, mutter or devise any manner of tale, news or report," of a further reduction in value. Yet in August that further reduction, the mere report of which might have cost the unfortunate tale-bearer his ears, was actually carried into effect and the teston was reduced from ninepence to sixpence.

By this time the debased coins formed a large part of the total stock of currency, and to halve their value in terms of the monetary unit was to make a very serious reduction in the supply of legal tender money. The next step was to set the

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[1] To provide a profit of £160,000 would require coin of the face value of £288,000. According to an entry in King Edward VI.'s *Journal* on the 6th September, 1551, the total issue was £130,000.

Mint to work on a new coinage of reasonable fineness, to circulate at its metallic value. A standard of 11 ozs. 1 dwt. (or very slightly less than the old standard of 11 ozs. 2 dwt.) was adopted, and a pound of silver of this standard was to be coined into 60s. with a seignorage of 1s. In other words, the Mint price of $11\frac{1}{20}$ ozs. of fine silver was reduced from 110s. 6d. to 59s. Even though the former price was higher than that actually prevailing in the market, it is evident that the rise in the metallic value of the monetary unit was enormous. And presumably, owing to the arbitrary reduction in the current value of the debased coins, it was immediately effective. The Duke of Northumberland can hardly be blamed for not reverting to the old standard of 45s. to the pound Troy. The return to 60s. must have caused hardship and disturbance enough, to say nothing of the loss to the holders of the debased coins.

Additional light is thrown on the effects of the debasement by the foreign exchanges. The principal foreign centre for the purposes of English trade and finance was Antwerp. The current coin there was the guilder of 20 stivers, and the unit of account was the Flemish pound, equal to six guilders, but divided into 20 shillings each of 12 groots or denarii. A guilder contained 396·674 azen [1] or 294·2 grains Troy of fine silver, and the par of exchange was 26s. 10d. Flemish to £1 sterling (on the basis of the silver coinage of 1526-1543).

Sir Thomas Chamberlayne wrote from Flanders on the 7th June, 1551, that since the calling down of the money (i.e. the reduction of the teston from 12d. to 9d. on the 30th April) the exchange had fallen from 15s. to 14s. Flemish for a pound of our money.[2] The teston contained 40 grains of fine silver. When it was rated at 9d. its melting-point would be reached if the price of silver were 9s. an ounce, fine, and this price of silver would have made the Flemish par of exchange 12s. 1d. Flemish to £1. It is not surprising, therefore, that the exchange fell to 14s. In August, the teston being reduced to 6d., the melting-point would correspond to a price of silver of 6s. per ounce fine, or an exchange of 18s. 1½d. The exchange, however, only recovered slowly. Perhaps people feared a further reduction of the current value of the debased money, and were reluctant to hold balances of it. At any rate, when Sir Thomas Gresham went out as financial agent to the British Government at Antwerp in December, 1551, the exchange was still no more than 16s. The new coinage then introduced made the Mint price 4s. 11d. for an ounce of silver 11 ozs. 1 dwt. fine, and £1 became equivalent to 20s. 5d. Flemish. Yet even in August, 1552, this rate had not become operative, for we find Gresham asking to be supplied with £1200 or £1300 a week at Antwerp to support exchange, and he mentions that merchants were saying that " ere the payment of the King's dett be made it will bring the exchange to xiii s. iiii d., wyche I trust never to see that daye." [1] By April, 1553, the exchange had reached 20s. 4d., and though it then fell to 19s. (and would have fallen, Gresham said, to 18s., but for his arrangements for meeting the King's debts) Gresham raised it " in two bourse times " to 19s. 8d. In August, 1553, in a memorial to Queen Mary asking for the continuance of his employment, Gresham claimed to have raised the exchange from 16s. to 22s., " whereunto it yet remaineth ". Perhaps Gresham genuinely believed that this improvement in the exchange was due to his own skill in outwitting or blackmailing the English merchants. His machinations may often have affected the exchange "in two bourse times," but a permanent improvement must have been due to a permanent cause. Ever since the reduction of the teston to sixpence two years before, there had been a shortage of legal tender money in England, a shortage which made itself more and more felt as confidence returned and trade revived, and which could not be made good except by the gradual issue of the new coinage at 60s. a pound from the Mint. The exchange therefore was bound eventually to rise so far above the new par of 20s. 1d. as to attract silver from abroad. In those days seignorage charges and obstacles to the movement of the precious metals made the gap between the specie points very wide, and 22s. was not at all a remarkably high maximum.

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[1] See W. A. Shaw, *History of Currency*, Appendix IV.

[2] See Tytler, *History of Edward VI. and Mary*, vol. i., p. 380.

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[1] Apparently 13s. 4d. being a depreciation of just over 50 per cent., was remembered as the lowest point touched by the Antwerp exchange. In a statement supplied to Queen Elizabeth, on her accession in 1558, Gresham says: " Ytt may please your Majesty to understande that the firste occasion for the fall of the exchange did growe by the Kinges majesty your latte ffather, in abasing his quoyne from vi ounces fine to iii ounces fine. Whereuppon the exchange fell from xxvi s. viii d. to xiii s. iv d., which was the occasion thatt all your ffine gold was convayd out of this your realme." There is an inaccuracy here, for Elizabeth's " latte ffather," Henry VIII., never reduced the fineness of the coin to three ounces. The reference must be to Edward VI.'s last debasement. At the accession of Edward VI. the depreciation was still moderate, the Mint price of silver being 60s. per fine pound. The Antwerp exchange at 13s. 4d. corresponded to a Mint price of about 96s. per fine pound.

It was on the strength of the passage here quoted that H. D. Macleod, in 1858, rather hastily gave the name of " Gresham's Law " to the principle that bad coin drives good out of circulation, though he afterwards found that the law was known before Gresham's time, at any rate to Copernicus and Oresme. There is really no evidence that the principle was not known to others even in the fourteenth century, when Oresme lived.

Substantially, the return to a metallic standard had been effected. The depreciation was a thing of the past. But the late King's "red and copper nose" was still to be seen. The base testons or shillings of Henry VIII. had weighed 120 grains and contained first 100, then 60, and then 40 grains of pure silver. The light shillings of Edward VI. had weighed 80 grains and contained first 40 and then 20 grains of silver. All now passed for sixpence. The new sixpence weighed 48 grains and contained 44·2 grains of silver. Consequently, while the old testons containing 100 or 60 grains of silver would be melted down, those containing 40 and 20 grains were still over-valued, and still continued to circulate. Nineteenth and twentieth century experience has shown that the circulation of over-valued coins, limited in amount, can continue without injury to the standard. But this depends on confidence in the discretion of the Government and respect for its decrees. In the sixteenth century the existence of such coins was felt to be a danger, and Queen Elizabeth soon after her accession determined to remedy it.

Her reforms were initiated by a proclamation of the 27th September, 1560, which reduced the current value of the testons containing 40 grains to 4½d., and of those containing 20 grains to 2¼d. (other coins of the same standards in proportion). The public was instructed to distinguish the coin by the Mint marks, and authorities were set up locally to settle disputes, and to mark the doubtful coins (those worth 4½d. with a portcullis, and those worth 2¼d. with a greyhound). At the same time the old standard of fineness, $\frac{37}{40}$ (from which Edward VI.'s standard of $\frac{221}{240}$ did not differ appreciably) was restored. As 40 grains of pure silver were therefore worth 5·4d., the debased coins were now under-valued, and consequently there was no difficulty in getting them brought to the Mint. The loss inflicted on the holders, in fact, was substantially greater than it need have been, and the consequent profit to the Government was sufficient to cover the whole expense of recoinage with a considerable margin.

At last, seventeen years after Henry VIII.'s disastrous venture, there was not merely a metallic standard but a metallic currency. The immemorial standard of fineness of $\frac{37}{40}$ was in operation ; the foreign merchant could once more rely on measuring the value of English silver by weight alone. The metallic value of the monetary unit, however, had been reduced by 25 per cent., for the penny weighed only 8 grains instead of 10⅔. But this unit had practically been in operation since 1551, when the redundancy of the base coins was cured by Northumberland's summary methods. Silver had been coined at the Mint at 8 grains to the penny ever since 1552, and the comparative steadiness of the Antwerp exchange showed that this coinage really governed the silver value of the unit. There was nothing sacred about the metallic value of the unit in those days, and there would have been little advantage to set against the hardship which a reversion to the old standard of weight would have caused.

The returns of the Elizabethan recoinage give us some indication of the extent of the debasement. The debased coins recoined weighed 631,950 lbs., and were coined into £638,114.[1] The average fineness was therefore a little less than one-third, showing that very few of those containing even 60 grains of fine silver can have been left. If the coins averaged, say, 54s.

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[1] Ruding, vol. iii., p. 37.

to the pound, the total face value of the debased coins dealt with must have been about £1,700,000.

This period, the middle of the sixteenth century, marks the end of the mediæval dearth of silver. The mines of the New World were beginning to produce their effect. The old system of fixing wages by statute broke down. Formerly successive debasements of the coinage had saved Europe from a perpetual fall of prices. Perhaps in England up to 1543 they had hardly been sufficient to accomplish this. But now that the purchasing power of an ounce of silver was falling, the inducements to debase the coinage were greatly diminished. Temporary difficulties might be caused by trade movements ; a country might still be drained of its money to pay for an adverse balance of trade if prices were too long maintained above the economic level. But with the prevailing upward trend of prices this became much less probable. In fact, except for the almost negligible reduction of the weight of the silver coins in 1601, when they were coined at 62s. instead of 60s. to the pound Troy, there was no further debasement in England, and though debasements were still frequent in France in the seventeenth century, the series ceased with the vagaries of John Law in 1720, and thereafter there was no important change in the silver contents of the livre or franc so long as it remained a standard coin.

The beginning of the seventeenth century was marked by the foundation of the banks of Venice, Amsterdam, and Hamburg. The primary function of these banks was to provide a stable and uniform money of account for international trade. They assessed the value of all the many varieties of gold and silver coin which circulated in Europe, and undertook to buy them from traders, paying for them with credits reckoned in this money of account, which was called bank money. As experts in the value of coined gold and silver, they discharged the functions which in the East belong to the "shroffs." Since the intrinsic value of a coin depends not only on its weight but on its fineness, and since its market value, even in a foreign country, may be materially raised above its intrinsic value by its quality of passing current in the country where it is issued, no one but an expert can be relied on to say what credit ought to be given for it. The banks of Hamburg, Amsterdam, and Venice, however, were not mere coin experts, since they not only valued the coins but bought them. On the other hand, they had not all the characteristics of modern banks, since they only created credits in exchange for coin or bullion; they did not create them in exchange for discounts and loans.

In England the course of events was different. The London merchants had no official shroff.[1] They had recourse, therefore, to dealers in bullion. This trade of dealing in bullion was in the hands of the goldsmiths, and the practice grew up of entrusting surplus balances of cash to them. The goldsmiths were not subject to the same narrow restrictions as the Continental banks. Like the old private bankers of Venice, they created credit by lending and discounting, and did not pretend to hold coin and bullion to the full amount of their liabilities. It is sometimes assumed that the goldsmiths took up the business of banking because they necessarily had strong rooms in which they could keep the money entrusted to them. It is much more likely that it was their knowledge of the bullion trade which specially fitted them for their new function. At any rate, they made full use of their expert knowledge. It was they who gave a market price to guineas above the value at which they were coined. It was they who made an illicit profit by "clipping" the silver coins, or sorting out the heavy coins for export or melting. Throughout the seventeenth century, while gold and silver were both becoming more plentiful, this was specially true of silver, and the value of gold in proportion to silver was steadily growing. The coinage ratio was altered spasmodically in different countries; each in turn lagged behind the others and began to lose its gold, and then, perhaps, raising the value of gold too high, began for a time to lose its silver. This was true of England. An efflux of gold was stopped in 1612 by raising the ratio to 13·3, as compared with 10·9, at which it had stood eight years before. For thirty years gold, being over-valued in England, was imported, and it was silver that was drained away. During the Commonwealth, the ratio of gold to silver in the European coinage systems having risen above 13·3, this was again reversed, and there was a tendency for gold to go abroad. In 1663 the weight of the gold coin was reduced, 44½ pieces of 20s., called "guineas," being coined out of a pound Troy $\frac{11}{12}$ fine, instead of 41, but the ratio of 14·5 thereby established was still too low, and if the nominal value of the guinea had been observed the country's stock of gold coin would soon have been lost. The goldsmiths, however, were in a position to charge what they pleased for gold. They were entitled to pay their depositors in silver, which was the standard coin, and were in a position to stipulate for more than 20s. for the guinea if gold were wanted. Gold, being much the more convenient medium for large payments, often was wanted, and the market price of the guinea was kept up to about 22s. So long as this high price prevailed, silver was under-valued as compared with gold. The goldsmith, finding that he could sell his silver for more gold abroad than at home, became unwilling to pay out silver coins of full weight to his English customers. He put by the heavy coins, to be ultimately melted or exported, and paid out the light ones. When he had no light ones left, it seemed a pity to waste heavy ones, and so he clipped them and made them light.[1] The clipped coins in practice circulated as easily as those which had been coined light or reduced by wear, and the clippings were so much additional gain.

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[1] Perhaps Charles I.'s ephemeral revival of the office of King's Exchanger in 1626 may have been intended to meet this need.

By 1690 some misgiving was already caused by the bad state of the silver coins, and a Parliamentary inquiry was instituted, but nothing was done. At that time, though much of the silver coin was light, and unfit for export, it had not depreciated. The clipped coins and the heavy coins circulated side by side at a value equal to the silver contents of the latter. The market price of silver bullion did not differ greatly from its Mint price of 5s. 2d. an oz., though now and then, when there was a special demand for export, it might rise to 5s. 3½d. The monetary unit of account was still at its silver par.

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[1] The *new coins*, those manufactured since the Restoration, did not circulate if clipped, since they had milled edges which showed the clipping. They were for the most part melted or exported.

But in 1689 there occurred a new development. England, being brought into the political orbit of Holland, joined in the coalition against Louis XIV. The eight years of warfare that followed put a strain on the finances of all the combatants, and one of the most important functions of England was to supplement the resources of the great financial centre, Amsterdam, with the newly-developed credit system of London. The London goldsmiths, however, were rather lukewarm supporters of the Government and of the war. Though Charles II. had half-ruined them by repudiating his debts to them, there was a danger that the Revolutionary Government would not recognise the obligations of the Stuarts, and their chances of recovering their money were diminished so long as the dynasty which had robbed them was not on the throne. The result was that in 1694 an entirely new credit institution was set on foot by the London merchants, independently of the goldsmiths, to provide money for the Government. The money, to the amount of £1,200,000, was to be subscribed not to the Government but to a new bank, which in turn would lend it to the Government. The Bank of England was incorporated by a statutory charter, and was empowered to issue notes to an amount equal to its capital of £1,200,000, and to discount bills and make advances of money. The scheme was well calculated to attract the merchant's money. He could afford to open his strong-box and to put the hard cash which it contained at the disposal of the Government, because he could rely on borrowing from the bank as soon as he needed the cash again. The goldsmiths were accused of making loans on usurious terms, and some of them were of doubtful solvency ; the credit facilities offered by the new bank would enable merchants to economise balances more effectively than before.

Thus the foundation of the bank added £1,200,000 in paper to the purchasing power in circulation, and at the same time enabled traders to carry smaller balances than before. The effect was inflation. Had the currency been in a sound condition the consequence would have been an export of gold and silver. But there was no heavy silver, and the goldsmiths could put what value they pleased on gold. The currency began to depreciate. The capital of the bank was subscribed by the 2nd July, 1694, the charter was granted on the 24th July, and it began business forthwith. Even before the end of 1694 the prices of gold and silver bullion began to be slightly higher than usual. The guinea, which usually passed at 22s. or less, rose in December to 22s. 6d.; silver, of which the Mint price was 5s. 2d. an ounce, touched 5s. 5d. in November.[1] The guinea rose steadily throughout the first half of 1695, and reached a maximum of 30s. on the 14th June. Silver also rose, but neither so quickly nor so much. It was at 6s. 5d. in September. Neither silver nor gold reacted far from these maxima for the remainder of the year. What was of more immediate importance was that the exchange on Amsterdam fell to 29, 28, and even 27 as compared with a par value of 37; that is to say, it was at a discount of 22 to 27 per cent. Remittances from England to the Army in the Netherlands lost about a quarter of their value by exchange.

It was seen that the only remedy was a reform of the coinage. But this presented many difficulties. Should the silver contents of the pound sterling be maintained or diminished? Should the clipped silver be received at its nominal value, or, as in Elizabeth's recoinage, at its bullion value, or at some intermediate value? If it were received at anything above its bullion value, what would the cost be, and how was it to be met? A Parliamentary Committee was appointed in January, 1695, when the depreciation was only beginning, and recommended a slight reduction in the weight of the pound sterling. But the evil developed rapidly, and the Government called for a report from the Secretary of the Treasury, William Lowndes.

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[1] For particulars of the prices of gold and silver and the rates of exchange on Amsterdam, see Thorold Rogers' *First Nine Years of the Bank of England.*

Lowndes proceeded to examine previous similar cases. He found that precedent was against any alteration in the fineness of the silver coinage. The standard of $\frac{37}{40}$ had been maintained unaltered century after century, save for the unhappy exception in the reigns of Henry VIII. and Edward VI. A departure from a standard supported by so long a tradition would be almost dishonourable. "All foreigners that deal with us regard the intrinsic value more than the extrinsic denomination, and exchange with us accordingly. If base money should be made, the intrinsic value thereof would be uncertain, or might be disputed." In fact, the value of English silver would no longer be ascertainable by the weight alone, and confidence would no longer be felt in it.

But, though the standard of *fineness* had so long a tradition behind it, Lowndes found that the standard of *weight* had been repeatedly reduced. The reason, he held, was "that whensoever the extrinsic value of silver in the coin hath been, or shall be less than the price of silver in bullion, the coin hath been and will be melted down." This was exactly what the country was suffering from in 1695. The monetary unit of account had parted company from the metallic standard. Silver bullion was quoted at 77d. an ounce, and shillings containing more than $\frac{12}{77}$ of an ounce of standard silver were necessarily exported or melted down.

"One may foresee," says Lowndes, "that continuing the silver monies (either old or new coins) upon the present foot, whilst bullion is so much dearer, will inevitably produce consequences pernicious to the whole; in effect, it will be nothing else but the furnishing offenders with a species to melt down at an extravagant profit, and encouraging not a necessary, but a violent and exorbitant exportation of our silver to the foreign parts, for the sake of the gain only, till we shall have little or none left in the Kingdom." He therefore recommended that the amount of silver in the pound sterling should be diminished by one-fifth; that is to say, that the Mint price of silver should be 77½d. an ounce instead of 62d. In order to avoid the expense and inconvenience of recoining the silver of full weight, which was still believed to exist, though hoarded and kept out of circulation, he proposed that the value of the coins should be increased rather than the weight diminished, so that the shilling would pass for 1s. 3d., the crown for 6s. 3d., and so on.

Lowndes' proposals were published, and elicited a famous reply from the masterful common-sense of John Locke. This reply, admirably expressed in Locke's characteristically vigorous English, denounced the raising of the value of the coins as a futile pretence. "The increase of denomination does or can do nothing in the case, for it is silver by its quantity and not denomination that is the price of things and the measure of commerce; and it is the weight of silver in it, and not the name of the pieces that men estimate commodities by and exchange them for." "Money differs from uncoined silver only in this, that the quantity of silver in each piece of money is ascertained by the stamp it bears; which is set there to be voucher of its weight and fineness." "An ounce of silver, whether in pence, groats or crown pieces, stivers or ducatoons, or in bullion, is and always eternally will be, of equal value to any other ounce of silver, under what stamp or denomination soever." An excellent theory of currency this, with the great advantage of being intelligible, and Locke's reply has done much to promote the maintenance of a fixed metallic standard in his day and ever since. But with all its merits it had one defect—it completely missed the point at issue. *If* the value of the silver coins had depended solely on the quantity of silver they contained, the difficulty would never have arisen at all. Lowndes, notwithstanding his submissive acceptance of mediæval precedents, could see the distinction between the "intrinsic value" and the "extrinsic denomination" of the coin; between its value, when melted, as a raw material of industry, and its value as the legal means of discharging a debt. He understood that the two values might diverge, that a clipped coin might contain less than its nominal value in silver and a heavy coin more, that the price of silver meant something other than the price of silver in silver. But, of course, he had not arrived at the conception of a money of account measurable by its purchasing power in terms not only of silver but of commodities generally; a monetary unit, a change in the value of which meant a change in all prices and wages. He argued that, if the price of silver had risen, that must be because silver was scarce, owing, as he said, to an unfavourable balance of trade. And yet further on he attributes to the clipt or bad moneys the " raising the price not only of merchandises, but even of edibles and other necessaries for the sustenance of the common people, to their great grievance." The rise in silver and the rise in gold were merely symptomatic of a general rise of prices, or, in other words, of a fall in the value of the monetary unit. Nowadays, such a fall can be corrected (not without tribulation) by a curtailment of credit. In 1695 no such method was known; if the clipt coin was withdrawn, and coin of full weight issued in its place, silver must be exported until the scarcity of money *compelled* a reduction of prices. Lowndes foresaw the export of silver, though he did not see that it would eventually be checked by a fall of prices. Locke remained blind to the danger.

Locke, however, amid all his vigorous irrelevancies, produced one argument which deserved to be decisive. If the money be raised one-fifth, he said, " it will weaken, if not totally destroy, the public faith, when all that have trusted the public and assisted our present necessities, upon Acts of Parliament, in the million lottery, Bank Act, and other loans, shall be defrauded of 20 per cent. of what those Acts of Parliament were security for."

Circumstances had changed since the time of Queen Elizabeth; currency problems had been transformed by the development of credit. England was playing a leading part in a great Continental war. Her greatest contributions to the coalition of which she formed part were then, as they were against Napoleon, and as in the Great War, wealth and sea-power. To utilise her wealth, it was indispensable that her Government should command confidence. The Government had become the greatest of all debtors. Was it calmly to reduce the burden of its debts by the simple process of calling 16s. a pound? If so, where was it to stop? Perhaps when the old shillings had been circulating as "testons" at 1s. 3d. for a year or two, the Secretary of the Treasury, reinforced by one more precedent, might have found it necessary to urge that the value be raised to 1s. 6d., to 2s., indeed, to any sum without limit. Moreover, the national debt was not the only new circumstance. The mediæval debasements had usually been effected when the money had already been clipt and depreciated for a long period of years. Edward VI.'s first attempt to coin good silver at 60s. to the pound Troy was made seven years after the first issue of silver 50 per cent. fine; and the successful recoinage of 1560 took place seventeen years after the beginning of Henry VIII.'s debasement. But the depreciation of 1695 took every one by surprise. In December, 1694, the prices of guineas and silver bullion were almost normal. By June, 1695, the guinea had risen one-third; and by September silver had reached its maximum of 6s. 5d. an ounce. To stereotype the effects of so sudden a disturbance was a very different thing from giving legal recognition to a fall in the monetary unit which had persisted for seventeen or even for seven years.

Further, the justification for the mediæval debasements had been the intractability of prices and wages. But prices and wages had become very much more pliable. It was still true in 1695, as indeed it is at the present day, that it is much easier to reduce the metallic standard to the monetary unit than to raise the monetary unit to the metallic standard. A reduction in the metallic standard involves no more than a recoinage, perhaps even no more than a proclamation altering the denominations of the existing currency. A rise in th value of the monetary unit of account means a change in *all* prices and nominal values. But in 1695 it might be regarded as certain that trade would soon accommodate itself to a restored level of values. The process must necessarily be unpleasant, but the maintenance of a stable metallic standard was worth the sacrifice.

The sacrifice was a serious one. The mere direct cost to the Exchequer was, for those times, prodigious. Lowndes had estimated that the silver coin in circulation was £5,600,000, that of this total £4,000,000 was probably clipped and seriously deficient in weight, and that the cost of restoring the £4,000,000 to the old standard would be £2,000,000. The actual amount recoined in the years 1696-99 was no less than £6,882,000. Lord Liverpool, writing in 1805, estimated the total cost at £2,700,000.

The transition period, while the recoinage was taking place, was full of difficulty and danger. In February, 1696, the value of guineas was reduced immediately to 28s., and prospectively to 26s. as from the following 25th March, and a further Act reduced it to 22s. as from the 10th April. This measure, by itself, if effective, would have soon led to the displacement of gold from circulation by the over-valued clipped silver, but it was accompanied by arrangements for withdrawing the silver at face value up to the 4th May, 1696. There followed an interval of extreme embarrassment, when business had to be carried on almost without coins below the value of the half-guinea. The natural consequence was that every one who had the right to draw silver from the banks, the Bank of England and the Goldsmiths' banks alike, proceeded to do so. The Goldsmiths themselves presented batches of notes to the Bank of England for payment. Macaulay, quoting l'Hermitage, says that this was the result of a plot, and that the Directors, on that ground, refused payment. However pleased the Goldsmiths may have been to see their Whig rival in difficulties, little plotting can have been required to bring about a simultaneous exercise of their rights to demand silver from it at a time when they must have been at their wits' end to satisfy the demands of their own customers. The result was that the Bank of England had to suspend cash payments, except for such partial payments as the gradual issue of the new coins enabled it to make. And when the new silver did get into circulation, the Bank of England note was at a discount of 16 per cent. The discount continued, subject to fluctuations, till September, 1697, reaching a maximum of 24 per cent. in February, 1697. In fact, till the end of the war there were two monetary units, one based on specie and the other on paper, and the latter remained simply unaffected by the recoinage. There were two quotations of the foreign exchanges, the quotation in paper being practically as adverse as before. When the Bank of England, relieved from the strain of finding money for the war, surmounted its difficulties, and paper and money prices were again identical, the exchange on Amsterdam was again unfavourable. From July, 1697, to the end of 1700 it remained between 35 : 1 and 35 : 10, as compared with a par of 37. This was nothing like the state in which it had been in 1695, but it meant that the money of account had never quite accommodated itself to the restored silver standard. The guinea, it is true, passed regularly at 21s. 6d., as compared with the legal maximum of 22s., but even 21s. 6d. was an over-valuation. The newly-coined silver was steadily drained away, just as Lowndes had foreseen. As the value of the guinea became stereotyped, the country settled down to a virtual gold standard.

In 1717, the dearth of silver becoming serious, Sir Isaac Newton, who held the post of Master of the Mint, warned the Government that unless something were done, silver coin would soon be quoted at a premium, i.e. the money of account and the metallic money would again part company. He calculated that in order to counteract the over-valuation of gold the guinea ought to be reduced to 20s. 8d., and recommended that at any rate it should be reduced to 21s. It was fixed at 21s. by proclamation, and, this being still an over-valuation, hardly any silver was brought to the Mint to be coined for a century. The residue of the coins of William III. remained in circulation, becoming more and more worn, till at last in 1816 the restricted coinage of over-valued silver of limited legal tender was introduced. Thus in the end the silver standard so earnestly advocated by Locke never was effectively restored. The monetary unit of account, remaining persistently below its nominal silver value, assumed by use a gold basis. Locke's arguments, however, were not wasted. They were called in aid in the nineteenth century to defend the gold standard more effectively than in his own day to defend the silver standard.

CHAPTER XVII.

THE ASSIGNATS.

THE nearest parallel to the Great War of our own day is to be found in the wars of the French Revolution and Empire. Somewhat less concentrated and more intermittent, those wars shared with it nevertheless the terrible characteristics of economic ruthlessness and world-wide extent. The economic protagonists were France and England. For both, the economic strain made itself apparent in grave currency difficulties. In the case of France these difficulties belonged chiefly to the early years of the war. The assignats have taken their place in history as the classical example of paper money made worthless by over-issue. After their final collapse in 1796 French finance reverted perforce to a metallic basis, and so remained till 1815.[1] In England the currency difficulties began just when those of France ended. The restriction of cash payments by the Bank of England occurred on the 27th February, 1797, and continued throughout the war, ending only in 1819, four years after the conclusion of peace.

The issue of the French assignats was not in the first instance a war measure at all. The immediate occasion of the Revolution was the financial impasse in which the Government found itself. Minister after minister had failed to devise a way out ; the deficit grew ; and it was above all the exemption of the aristocracy and the church from taxation that obstructed every attempt to balance the budget. When, therefore, the Etats Généraux met in 1789 it was their special mission to find the means of averting bankruptcy, and even in the enthusiasm of the creation of a new polity this pressing duty could not be evaded. Privilege fell. But the unpopular taxes were repealed, and the disorder and loss of confidence paralysed the taxes that remained. In its disinterested enthusiasm the Assemblée Constituante voted compensation for vested interests in many of the feudal dues and other limitations on liberty which it abolished, and the hoped-for balance of the budget seemed further off than ever. Necker, the Minister of Finance, attempted to borrow, but his loans were little more than half subscribed.

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[1] The Bank of France had to suspend cash payments more than once, but in those days its circulation played a modest part in the business of the country. Far the greater part of the transactions were in specie.

The provision of the immediate means of payment became urgently necessary. In the confiscated lands of the king and the clergy the State had become possessed of an asset more than sufficient to meet the accumulated deficits of many years. The *biens nationaux* are believed to have been worth 3500 millions of livres,[1] while the whole expenditure of the budget was some 500 or 600 millions, and the deficit for 1789 was estimated at 140 millions. Here was a guarantee of solvency, but the problem was to make it immediately available. A succession of forced sales would sacrifice a great part of its value. In December, 1789, the Assembly decided to issue a series of notes or " assignats " of 1000 livres each, bearing interest at 5 per cent., to be accepted from purchasers in payment for the *biens nationaux* These notes were part of the floating debt ; not being legal tender they were not paper money.

An issue of inconvertible paper money in fact was already in existence. The notes of the *Caisse d'Escompte*, an institution founded by Turgot in 1776, had been given forced currency in August, 1788. Necker was driven to follow the example of his predecessors in borrowing from the *Caisse*, and in November, 1789, when the forced currency was prolonged to the 1st July, 1790, the debt of the Government to it had reached 155 millions. The first assignats were to a great extent discounted with the *Caisse d'Escompte*, and so formed the basis of issues of legal tender notes.[1]

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[1] The livre was almost the exact equivalent of the franc which took its place in 1803, so that £1 = 25 livres.

The first issue of assignats which were themselves legal tender was decreed in April, the amount authorised being 400 millions. These assignats bore interest at 3 per cent.; they were for sums of 200, 300, and 1000 livres. From the very beginning they circulated at a discount of about 5 per cent. In September, 1790, a further issue of 800 millions was decreed, this time without interest. This issue was *mere* currency, and the old issue was put on the same footing, interest on it ceasing in October. The total authorised issue was thus 1200 millions, but meanwhile the *biens nationaux* were being sold, and the assignats received for them were all burnt. The discount, however, rose to 10 per cent. Necker had estimated the total stock of metallic currency in France a few years before at 2200 millions, and at first sight it seems surprising that a paper circulation of something less than 1200 millions should fall so substantially below par. Memories of John Law's debauch of paper money in 1720, and distrust of the new system of government may have contributed to the depreciation. But the principal cause of it seems to have been the relatively large denomination of the assignats. The minimum of 200 livres had not been retained in the issue of September, 1790, but even so the smallest assignats were for 50 livres, and there were comparatively few of these. So long as assignats were not issued in sums convenient for the payment of wages, their sphere was very restricted, and it is only natural that when issued to an amount equal to more than half the entire monetary supply of the country, they should fall to a discount. In the first months of 1791 great difficulty was felt from the scarcity of small change. Even assignats of 50 livres were at a premium compared with those for larger sums. In May, the discount being then 15 per cent., an issue of 100 millions in assignats of 5 livres was authorised in replacement of an equal amount of those of larger denominations. There was an immediate rush for these 5-livre notes, and speculation quickly raised them to a premium.

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[1] See Stourm, *Finances de l'Ancien Régime et de la Revolution*, pp. 265-70.

Perhaps if the substitution of small notes for large had been continued so long as the demand lasted, and no fresh issues of large assignats had been made, the whole issue might have recovered. But by a decree of 28th June a further issue of 600 millions had been approved, and these soon began to pass into circulation. In the period of two years and two months, from the 1st May, 1789, to the 1st July, 1791, the public expenditure had amounted to 1719 millions, of which no more than 470 millions had been met from revenue. The deficit was thus some 1250 millions, and it was growing day by day. To meet this deficit there was no resource but paper money.

No pretence was any longer made of setting a final limit upon the circulation. Each successive decree prescribed a limit, but there was no expectation that the limit would continue in operation and no surprise when it had to be raised. In November, 1791, the assignat was still worth 82 per cent. of its face value,[1] but the ever-growing inflation, aggravated by the approach of war, rapidly depressed it. War was declared on Austria in April, 1792. In June the assignat fell to 57. By the beginning of August a net circulation of 2000 millions (after the deduction of assignats withdrawn) was authorised, and assignats of 50, 25, 15, and 10 sous were now being issued. In September, however, there was a recovery. In August the monarchy fell. September saw the September massacres, the meeting of the Convention, the declaration of the Republic, the ignominious retreat of the Prussians from Valmy. In that crowded month the assignat stood at 72, the same figure as in January, and remained at approximately that level till the end of the year. Was this a sign of reviving confidence? A final break with the monarchy and all its subterfuges and vacillations, and the establishment of a Government of undivided Republican sympathies may have seemed a great gain, but the danger of anarchy must have weighed heavily on the other side. It seems more probable that the fall in the summer was overdone. It was a speculative movement, which the economic as distinguished from the political conditions did not justify. The year 1792 was one of great credit expansion, of which the trade activity in England was clear evidence, and the consequent fall in the value of gold and silver or rise in the prices of commodities would be reflected in a rise in the value of a paper currency which did not itself participate in the expansion. This is an example of a very frequent phenomenon, the relief of depreciation in one country through the occurrence of a credit expansion in another. But such was the flood of new paper in France that the reaction from the English market could only delay the fall; it could not on balance produce an actual rise beyond the level marked at the beginning of the year.

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[1] The Schedule to the Law of 5 Messidor, An V (23rd June, 1797), giving the average value of 100 livres assignats in specie for each month, is quoted in Courtois' *Histoire de la Banque de France, etc.*

In January, 1793, Louis XVI. was guillotined, and war was declared on England. The spell of prosperous trade in England ended in a sudden and disastrous crisis. The foreign exchanges turned violently in favour of London, but none more so than that on Paris. The exchange on Paris had been keeping pace approximately with the value of the assignats; as gold was wanted primarily for export, and was therefore more valuable in London than in Paris, there was generally a greater premium on exchange than on louis d'or. In December, 1792, the 100 livres in assignats were worth 72 in coin. The exchange on London averaged, in November, 19⅝d. and in December 18$\frac{9}{16}$d. As the par was 28¾d. to the écu of 3 livres, the assignats were worth 68·3 and 64·6 per cent. of their par value in terms of sterling in those two months. In January, 1793, the assignat fell to 51, and the exchange to 16d. After violent fluctuations values seemed to collapse altogether. The average for June was 36 and for August 22. The exchange in June was 9$\frac{7}{16}$d. and in August 6½d. Indeed, momentarily on the 2nd of August the exchange was only 4¼d. or hardly 15 per cent. of its par value. So serious a depreciation called out for a remedy. Free dealing in the precious metals made the persistent decline in value painfully evident, and a decree of the 11th April prohibited the buying of gold or silver at a premium and provided that all monetary obligations were to be obligations to pay in assignats; if payment were made in coin it must be at par. But it was impossible to improve the dog's temper by wagging his tail, and the premium on specie rose apace.

But the depreciation of August, 1793, though mild compared with what was to follow a year or two later, was again little more than a speculative vagary. This was the great crisis of the Revolution. The peril of new enemies arising on every frontier, the destitute condition of the armies, the treason of the generals, the outbreak of civil war, the paralysis of a new and untried Constitution based on a systematic weakening of the executive, combined to menace the new régime. Love of their country no less than love of their liberties impelled the French to rally to those leaders who were ready to dare everything. The Jacobins were installed with absolute power in the Committee of Public Safety; the Constitutional Party, the Girondins, who were the embodiment of the revolutionary virtues, but were too timid or too moderate for so desperate a crisis, were thrown into prison, soon to be butchered in the first of that demoniac tale of judicial murders which we call the Reign of Terror. The assignats, the legal status of which depended absolutely on the Revolution, suffered in value from the dangers that threatened the country and the Government. The premium on gold and silver could no longer be openly quoted indeed, and the fall in the foreign exchanges was a matter of little practical moment to a country which was at war with nearly the whole of Europe. But one consequence of depreciation could not be ignored. An indefinite rise in the prices of the necessaries of life occasioned acute distress and discontent and called for a remedy. In the spring of 1793 the Jacobin opposition had pressed upon the reluctant Girondin Government a measure prescribing a maximum price for corn, and when the Jacobins themselves came into power the principle was extended by successive decrees to all necessaries, including not only food, but cloth, leather, fuel, wood, etc. (Decree of 29th September, 1793).

The Jacobins saw clearly enough that if order was to be restored in the finances the volume of paper money in circulation must be reduced. The assignats remaining in circulation, after deducting those withdrawn through sales of *biens nationaux*, now came to 3776 millions. Three measures were relied on to reduce this total. The *assignats à effigie royale*, issued before the fall of the monarchy, were believed to be in the hands of royalist sympathisers, and those above 100 livres, to a total value of 558 millions, were demonetised. They lost their legal tender character, but were to be accepted for a period in payment of arrears of taxation or of the purchase price of the *biens nationaux*. The arrears of taxation, amounting to from 500 to 700 millions, were to be collected. And a forced loan, assessed on income, was to be levied, and was calculated to yield 1000 millions. There was no hope of the ordinary budget balancing, but with these resources the plethora of paper might at any rate be reduced.

In August the law of April enforcing the use of assignats as the means of payment was strengthened. It became an offence to sell coin, or to differentiate between coin and assignats in any transaction, or to refuse payment in assignats, or to negotiate assignats at a discount. By a decree of the 8th September the death penalty itself was imposed.

Here was a forced currency indeed. At some periods of the world's history such crude expedients have been rightly derided by economists as being unenforceable and ineffective. But France, in return for her fearful sacrifice in submitting to the Terror, received, at any rate, the advantages of a strong Government, a Government which could organise victory and save the Republic, a Government which could make realities of a forced loan, a schedule of maximum prices, or a legal tender law. Economic or uneconomic regulations might be evaded or ignored under the Gironde and afterwards under the Directorate, but under the Terror even economic regulations were not to be trifled with. The prospects of France and the prospects of the Revolution rose. In November, 1793, the assignat was at 33, or 50 per cent. above the panic quotations of August. In December it leapt up to 48. Thiers states that it even rose to par, and at any rate it may have been appreciably above 48, which was the average quotation for the month. Like the low level of August this rise was in part artificial. Gold and silver themselves were depressed in value in consequence of a law against hoarding ; hidden treasure was liable to be confiscated, half to the Government and half to the informer. Specie and foreign balances were alike needed by the Government for the purchase of supplies abroad, an important requirement in spite of all the interference of the war with commercial intercourse.

The Government exacted a part of the taxes not in assignats but in kind. Other supplies were requisitioned at prescribed prices. Not merely were war supplies requisitioned, but the people of Paris were fed with requisitioned corn. Yet notwithstanding all the requisitions and transactions in kind a vast expenditure in money was necessary. The emergency measures themselves destroyed enterprise ; there were no free markets except for luxuries, and it was no time for luxuries. The ordinary sources of revenue were almost dried up. The administration of the all-important Impôt Foncier was unwisely devolved on local authorities who had no interest in gathering it in. The deficit was made up by incessant additions to the authorised issue of assignats. Speaking on the 4th November, 1794, Cambon, the Minister of Finance, estimated that the expenditure in 1792 had been 1800 millions, and in 1793, 2000 millions, and that it had risen to 300 millions a month. At that time the assignats in circulation amounted to 6400 millions, and they were still worth 24 per cent. of their nominal value.

At last there came a relief of the tension ; the circle of enemies was triumphantly broken ; it was no longer necessary to subordinate every private interest to the absolute will of the Executive. The Terror, in fact, perished of its own success. Victory brought security, and the remoter the danger the more odious became the butcheries perpetrated by the bitter fanaticism of Robespierre and the vindictive brutality of his evil colleagues. With the fall of Robespierre on the 9th Thermidor (July, 1794), the Terror ceased, but the military, economic, and political system of the Committee of Public Safety did not immediately come to an end.

So far as the economic system is concerned, the first important step was the repeal of the law of the maximum on the 24th December, 1794. Maximum prices have a paralysing effect on trade. No one is willing to sell, and goods have to be wrenched from the dealers' hands and forced into the market by the Government. Let the limitation of price be withdrawn, and every one is willing at once to resume business. But there is no recent experience by which to measure demand, and the result is a bewildering uncertainty of prices and an orgy of speculation.

This is what happened in France in 1795. Even in September, 1794, three months before the actual repeal of the law, there were complaints that the maximum was no longer enforced.[1] At the same time it was said that there were goods in plenty.[2] Once people saw that the maximum simply prevented them from buying, and that if they could evade the law they could have whatever they could pay for, the system was doomed. But the repeal let loose forces the effects of which had not been foreseen. Traders who had been paid in assignats for all that they had been compelled to sell for eighteen months past, and had been unable to buy anything because no one would sell at the maximum prices, pressed forward to spend all this idle money on replenishing their stocks. In proportion as traders hastened to spend, prices went soaring upwards, and in proportion as prices rose, traders became the more eager to turn money into commodities, and to reap the profit of the almost unlimited rise which they foresaw. This sudden dissipation of balances flooded the market with assignats, and produced a headlong depreciation.

And this depreciation now became directly measurable against specie. For a time, indeed, the prohibition upon dealings in specie remained legally in force. But even before the repeal of the maximum speculators were beginning to sell gold and silver as " nankin " or " muslin," and the police were unable to prevent the traffic.[1] With the repeal of the maximum there came a decree of 2nd January, 1795, permitting the exportation of specie, provided products necessary to life were imported in exchange. This did not authorise dealings in specie at a premium, but it opened the door to the quotation of specie prices. Once coin had become the legally recognised means of purchasing foreign commodities, its place as a measure of value was re-established, and almost immediately we find evidence here and there that the law against differential prices is being defied, and payment in coin stipulated for. This is still the exception in Paris itself, but it is fast becoming the rule in the country districts, even quite close to Paris.[2]

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[1] Aulard, *Paris sous la Réaction Thermidorienne*, i., p. 91. This work containing the daily reports of the Paris police on the state of public opinion, etc., together with extracts from the newspapers, provides invaluable material for studying the successive phases of the assignats.

[2] *Ibid.*, i., pp. 139 and 155.

Till the end of February, 1795, the depreciation, though continuous, was not perceptibly accelerated. Indeed, whereas the assignats fell from 28 per cent. in October to 20 in December, they were still at 17 in February. Nevertheless, this was the lowest point yet recorded, and represented a drop of one-half since the fall of Robespierre seven months before. There had not been so severe a decline since that of the summer of 1793. The Convention turned their attention seriously to the problem at the end of February. Cambon, the Minister of Finance, proposed a lottery on a gigantic scale, and a number of other projects were discussed, all being designed for the purpose of raising a large sum of money in assignats and withdrawing the paper so received from circulation. The principle was the same as that of the forced loan of 1793, but the magic of decision was gone. The various plans were referred to the Committee on Finance, and while the Committee deliberated, the collapse of the assignat went on apace. By April, when the Committee's spokesman, Johannot, presented its report, the paper money was worth little more than 10 per cent. of its face value. The report embodied a variety of proposals. Its general tendency was towards greater freedom. Bargains were to be permitted in any medium of payment, whether metal or paper; the Bourses in Paris and elsewhere were to be opened; the value of silver bullion in assignats was to be officially ascertained and published monthly. A final batch of 3200 millions in assignats was to be manufactured, not to be immediately issued but to be held in reserve, and thereupon the plates were to be once and for all destroyed. The *biens nationaux* were to be paid for in assignats at their silver value. A land bank was to be started, to issue a new kind of security, *cédules d'hypothèque*, secured on specified portions of the *biens nationaux*, not legal tender, but transferable by endorsement, and bearing interest at 3 per cent.

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[1] Aulard, i., p. 172.

[2] *Ibid.*, i., pp. 420, 480, 490.

An important instalment of these proposals was passed on the 25th April. Specie was declared to be "merchandise." The Bourses were opened. The 3200 millions of assignats were authorised (though the plates were not destroyed and the issue was far from being final!).

The discussion was resumed in May. A member named Raffron put forward a motion that the value of the assignats should fall automatically by 1 per cent. every month. This aroused a storm among the Jacobins, and a resolution ruling out of order any proposal in the direction of demonetising the assignats was carried by acclamation. Perhaps Raffron's motion was not meant too seriously, and the real aim was to outmanœuvre the proposal for fixing the value of the assignats in silver according to the market quotations. For this latter proposal, which certainly partook of demonetisation inasmuch as it divorced the assignats from the money of account, and set no limit to their possible divergence, was not further discussed.

The growing turbulence of the Jacobin faction broke out into open violence in the latter part of May, and the discussion on the Johannot report was interrupted. On the 21st May, in the midst of the turmoil, according to a brief notice in the *Moniteur*, the law declaring specie to be merchandise was again repealed.

Quiet being restored, the discussions on currency and finance were resumed. On the 4th June, a law was passed authorising the system of *cédules d'hypothèque.* The same law declared that assignats and coin bearing the stamp of the Republic were the sole legal money. The effect of the various decrees relating to specie is not very easy to unravel. For some reason or other the hasty repeal of the law which made specie merchandise, on the 21st May, seems never to have had any operative effect. At any rate, the dealings in gold and silver on the Bourse were in no wise interfered with, and when a law was passed at the end of August giving the Bourses in Paris and elsewhere a monopoly of dealings in the precious metals, "*soit monnayés soit en barre, en lingot ou ouvrés,*" there was no suggestion that transactions not otherwise lawful were being legalised. Finally, on the 12th March, 1796, the *Moniteur* again records that "the law which declared gold and silver merchandise was repealed." It is possible that the law of the 4th June, which recognised no other metallic money than that coined by the Republic, was interpreted as legalising dealings in *louis d'or* and *écus* of the old régime, and in bullion and foreign coin. The republican coinage included no gold and very little silver (only 32,000,000 francs up to May, 1797), and if that alone was not to be treated as merchandise the continuance of free dealings in other forms of specie is explained.

The *cédules d'hypothèque* were a failure. Indeed, what was the use of expecting people to lend with the prospect of being repaid in assignats? No proposal for borrowing from the public could succeed so long as the lenders had no safeguard against an indefinite depreciation of the medium in which they were entitled to repayment. When the proposal for fixing the value of the assignat in silver every month was dropped this part of the Johannot report lost all its utility.

But in any case it was too late. The critical months had already been lost. The assignat which had been worth one-sixth of its value when Cambon made his report in February, and one-tenth when Johannot made his in April, was now hardly worth one-fifteenth, and was fluctuating wildly and falling rapidly. The Jacobins, however, remained the champions of the paper money which had saved the Republic. The

Convention turned to the public lands which had always been regarded as the security for the assignats. All that was needed to rehabilitate them was to make them convertible on demand into this security. But it could not be said that the holder of a sum in assignats was entitled to any definite amount of land. Hitherto the lands had been sold by auction, and the price rose as the assignats depreciated. No limit could be set to this process, and to sell the land to the highest bidder was undeniably to give less land than had been originally contemplated. The valuation of 1790 afforded a basis for fixing the price of the land, and a decree (29th May) was passed that it should be sold to the first comer at seventy-five years' purchase of the annual value of 1790, or, say, three times its capital value. The Church and Crown lands seized in 1789 had been worth 3500 millions ; the lands of the *émigrés* seized in 1792 were worth 2000 more.[1] The sales up to date amounted to 3600 millions in *paper* (of which about two-thirds still remained to be paid up). Allowance being made for the inflation of paper values, the portion unsold might have been sufficient to withdraw many milliards of redundant assignats. But at the then value of the assignat the land was being sold at only three years' purchase, or thereabouts, of its real annual value, and for all that the obligations of the State were not being unequivocally met. The Jacobins could not stand such a sacrifice of the Republic's most cherished asset. The decree was hastily repealed, and the sales under it were annulled (7th June). This game of fast and loose was not calculated to revive the credit of the assignat. On the 7th June the *louis* of 24 *livres* was quoted at 585. On the 13th it leaped up to 1000, on the 15th it dropped to 600, and on the 16th even to 450. The position was becoming desperate. How could paper money subject to such wild vagaries be used as a medium of payment at all ?

One of the vices of the situation was that the public revenues dwindled in proportion to the assignats. It had been difficult enough to collect the taxes and the arrears were enormous, but when the assignat was worth only 5, 4, or even 2 per cent. of its nominal value the money was hardly worth collecting. In June an Act was passed making the assignats pass in payment of taxes for a reduced value bearing the same proportion to their face value as a standard sum of 2000 millions to the actual amount in circulation (rounded down to the nearest 500 millions). To avoid inflicting hardship on landlords who had to pay taxes on property which they had let on lease, the same rule was applied to rents payable under leases of land.

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[1] Stourm, *Finances de l'Ancien Régime et de la Révolution*, chap. xxx.

Nothing could demonstrate better than the operation of the proportional scale the manner in which the assignat had lost ground. It was estimated that in 1789 there had been 2000 millions of specie and 700 millions of paper in circulation. Some of the specie had undoubtedly remained hidden in the country all through the Terror, notwithstanding the law against hoarding. If the gap to be filled by the assignats in the currency system be taken at 2000 millions, then the 6400 millions in circulation in November, 1794, which were worth 1500 millions at 24 per cent. of their face value, nearly sufficed to fill it. At the time of Johannot's report in April there were about 8000 millions in circulation, which at 10 per cent. represented only 800 millions in specie. In June there were 13,000 millions in circulation and the average value of the assignat for the month was only 3·38 per cent., so that the whole issue was worth no more than 440 millions.

While the Convention had been debating, and referring bills back to Committees, and passing and repealing futile decrees, the assignat had practically ceased to be a medium of payment, and had become a mere object of speculation. Country people expressed their contempt for the assignats, calling then "*l'argent de Paris.*"[1] The Paris shopkeepers themselves refused to give change for the assignats of large denomination, or sometimes even to accept them at all, on the ground that the country people were refusing to take payment in paper for their produce.[2] The Convention remained in existence till the end of October, but during its last months its attention was occupied in Constitution-making and in preparing for the advent of the new Government. Currency matters were allowed to drift and the credit of the assignats was not assisted either by the grant of extra pay in metallic value to the troops or by the computation of the legislators' allowances in terms of corn. The premium on specie grew, now rapidly, now slowly; occasionally there was a momentary set back, but never for long. By the beginning of September the high quotation of 1000, which the *louis* had touched during the spasmodic movements of June, had been surpassed. After remaining at 1100 to 1200 for several weeks, the *louis* shot upwards in the middle of October. The Republic was changing horses while crossing a very torrential stream, and in the last days before the new constitution, with its *Directoire Exécutif* and its *Corps Législatif* of two Chambers, came into operation, quotations oscillated madly up and down. On the 26th October 2000 was reached, on the 28th 2750, on the 29th 3450, on the 30th the *louis* opened at 2600, rose again at 3450 and closed at 3150, and on the 31st it was back again at 2450.[1] The paper money in circulation had grown to 19,000 millions, and with the *louis* at 3000 this was equivalent to only 150 millions of specie.

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[1] Aulard, 1st July, 1795.

[2] *Ibid.*, 20th June, 1795.

Writers on the assignats have made much of the amazing prices at which commodities were bought and sold at this period. Of these it is really enough to say that they were proportional to the rise in the value of specie. In other words, they were fifty-fold their normal level in September, a hundredfold and more by the beginning of November. These prices were a reality in Paris, and in other places where Government disbursements kept up a perpetual fresh supply of assignats. In Paris the assignat, "*l'argent de Paris*," really was the medium of payment. But even in Paris a system was growing up of regulating prices of goods by the price of gold as quoted on the Bourse.[2] From fixing differential prices, the merchants and farmers in the provinces had taken to refusing to receive assignats at all. The country was steadily restocking itself with metal currency. The quotations of the foreign exchanges on the Bourse, from the time when they begin in the late summer, consistently show an enormous profit on the importation of gold. The premium on *louis d'or*, and on foreign gold coin was very much greater than the premium on foreign bills. In September and October the difference was as great as 20 per cent.; till the end of January, 1796, it was as much as 10 per cent.[1]

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[1] See daily Bourse quotations in the *Moniteur*.

[2] Aulard, vol. ii., p. 470.

When the Directorate came into power at the beginning of November, they turned their attention to the currency. On the 6th December they made their first important proposal. There was to be a forced loan, payable in specie or bullion or corn or in assignats taken at *one per cent.* of their face value, by which it was hoped to raise 400 millions in specie, and to withdraw 20,000 millions (counting as 200 millions) in assignats. The assignats were to become convertible into coin at the same rate of 1 per cent.; the manufacture of assignats was to be brought once and for all to an end; the plates were to be destroyed on the 19th February. But meanwhile the Government could not be left without any financial resource whatever, and they were authorised to continue the manufacture of assignats till the total issue reached the fantastic figure of 40,000 millions.[2] Great hopes were aroused, and, when the forced loan decree passed, the *louis*, which had been above 5000, fell in two days to 3500. The régime of the assignats was clearly coming to its close. The Government was indeed still meeting its liabilities in assignats. Civil Service salaries, however, had already been raised thirty-fold (28th November). In December it was enacted that half the Customs duties should be paid in coin. The valuation of the assignat at 1 per cent. might well provide a bridge by which the Government could return, as private traders had already practically returned, to a metallic standard.

But the Directorate was limited in its freedom by a legislature predominantly Jacobin. It did not command confidence. The assignats were still over-valued, even at 1 per cent., and the Government could not start redeeming them in specie at that rate. Indeed, practically no specie came into its hands. A continuance of paper money in some form seemed absolutely inevitable, and the next step was to devise a new issue of paper money, which should be absolutely secured against depreciation. The assignats, though they were supposed to be secured upon the public lands, did not entitle the bearer to any particular share in this security. The new notes, the "*mandats territoriaux*" (16th March, 1796), were to entitle the bearer to obtain land *on demand* at the fixed valuation of twenty-two years' purchase of the annual value of 1790 (or eighteen years' purchase for buildings). Though there are plenty of objections to such a currency system, it may be plausibly argued that, so long as the supply of lands remained unexhausted, depreciation would have been prevented. But it was never given a fair trial. The Committee of the lower Chamber (the Council of Five Hundred) introduced an amendment making assignats convertible into *mandats territoriaux* at one-thirtieth of their nominal value, and raising the amount of the mandats from 600 to 2400 millions to provide for the exchange (with an ample margin !). If one-hundredth had been too high a valuation of the assignat, one-thirtieth was impossible. The *louis* fell, it is true, from 7000 to 5300 in one day and to 4800 in one day more, but it soon reacted to about 6000. If it was to be valued in mandats at 720, there would merely be a repetition of the fiasco of June, 1795, when the Convention, unable to stand the sale of the *biens nationaux* at two or three years' purchase, had annulled the sales retrospectively.

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[1] For the serious effect of this on English currency, see next chapter, pp. 327-30

[2] "Fantastic" then, but moderate compared to some of the note issues we have seen in recent years.

To add to the distrust, the new currency when it came out consisted not of mandats but of "*promesses de mandats*" (authorised 19th March). "Rescriptions," or Government promises to pay cash, were already in circulation at an enormous discount, and promises to pay mandats could not be expected to fare better. Week after week, month after month, people wondered when the mandats proper were coming. The *promesses* were given forced currency and could be used to pay the first deposit for the purchase of land, but apparently the Government could not summon up courage to assume the liability to pay land on demand. Meanwhile the quotations of the mandats fell and fell. At the beginning of April they were worth no more than 20 per cent., at the end of April only 12, at the end of May they fell to 5, recovered to 10 in June, and fell away in July even below 5. Though they were given forced currency, and gold and silver were declared no longer " merchandise," the mandats never gained the same acceptance as the assignats. Whereas the *louis d'or* was quoted in assignats on the Bourse, it was never quoted in mandats; the mandats were quoted in terms of specie, as if they were themselves " merchandise." The assignats, while they lasted, really were the basis of the money of account; as fast as they lost ground, the metallic standard took their place, and a new network of debts and accounts, reckoned in coin, came into being. The mandats were intended, like any ordinary issue of paper money, to take the place of coin, but no trader who cared for his business would take advantage of the law (23rd March) which made stipulations for payment otherwise than in mandats unenforceable in the Courts. There remained for the time being two moneys of account, one following specie and the other the assignats, the two being linked together by the daily quotation of the *louis d'or*. But even the fixed thirty-to-one relation between the mandats and the assignats never led to the use of a third money of account following the mandats.

In currency questions the money of account is fundamental. The difference between high and low prices is in itself one of nomenclature only; it only acquires importance through the relation of prices to pre-existing debts. Even rates of wages, the observed tendency of which to lag behind price movements is one of the most serious evils of inflation, are only a particular case of debts reckoned in the money of account. The contract of service creates a debt every day from employer to employed, and the amount of the debt can only be adjusted to a change in the purchasing power of the monetary unit by a revision of the contract. It is worthy of remark that so long as the Paris workmen were ordinarily paid in assignats, there were no complaints of unemployment ; the high prices (always attributed to the knavery of speculators) were the perpetual grievance. Early in 1796 when the assignats had almost entirely given way to specie, unemployment becomes one of the chief grounds of discontent. But if wage contracts were not easily adapted to a monetary unit which depreciated by half every two or three months, commercial contracts were thrown into a worse chaos still.

The Convention had not been able to evade this question altogether. In July and December, 1795, emergency laws were passed suspending the right of redeeming or commuting annual payments, and prohibiting debtors from paying up before the due date. The winding up of the assignats in February, 1796, necessitated some sort of equitable adjustment of contracts. If the mandats were to be equal to specie, and debts were to be payable in this new medium, an utterly unfair burden would be placed on those who had contracted during the depreciation to pay in assignats. If a man had contracted in December, 1795, to pay 10,000 livres in assignats, then worth about 50 livres in cash, was he to pay 10,000 livres in mandats three months afterwards ? If he was allowed to pay less, what was to be paid by the man who had contracted in December, 1794, when the 10,000 livres were worth 2000, or in December, 1793, when they were worth 4800 ? A law was passed on the 4th April, 1796, establishing a statutory scale of depreciation. Every debt was to be adjusted according to the rate appropriate to the date at which it was contracted. This was in principle a concession to debtors, and by way of some compensation to the creditors the scale did not at any point allow the full degree of depreciation which had actually prevailed. Thus, in March, 1795, the prescribed rate was 40 per cent., and the actual value of the assignat no more than 13·28. After January, 1796, it was 2 per cent., and the actual value of the assignat only about $\frac{1}{3}$ per cent.

The collapse of the *promesses de mandats* raised the same problem in an almost more acute form, since the fall to 4 per cent. was accomplished in only four months. In July it was decided that the mandat should thenceforward be accepted even by the Government only at its market value, which was to be periodically announced officially. At last a law of the 4th February, 1797, demonetised all the paper money remaining in circulation, and permitted the mandats to be received in payment of taxes and of instalments on the purchase of the public lands at 1 per cent. of their nominal value.[1]

After much controversy the adjustment of debts was settled in principle by the law of the 23rd June, 1797, which enacted that obligations incurred between the 1st January, 1791, and the 29th Messidor IV (17th July, 1796) should be reduced to their value in metal, according to tables of depreciation which were to be settled separately for every department in France. This settlement differed from the law of the 4th April, 1796, when the assignats were wound up, in that it took the metallic value, and no more, as the basis of the debt. Much further legislation was necessary in 1797 and the following year to unravel the many complications that arose in practice.[2]

One effect of the failure of the *promesses de mandats* was that a large quantity of assignats remained in circulation. Apparently the amount in circulation at any one time never actually reached the authorised maximum of 40 milliards. The highest is said to have been 32 milliards. The result of the forced loan was disappointing; up to January, 1797, only $6\frac{3}{4}$ milliards had been received.[3] A considerable proportion of the assignats ought, therefore, to have been exchanged for *promesses de mandats* at the ratio of 30 to 1. But there was no profit in doing this, and much of the issue remained outstanding till the general demonetisation of paper money in February, 1797.

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[1] Stourm, ii., p. 327.

[2] For an account of this legislation and of the whole question, see *Tableaux de Dépréciation du Papier-monnaie reédités avec une introduction*, par Pierre Caron, 1909. I am indebted to an article, "De franska assignaternas avlösning," by Professor E. F. Heckscher, which appeared in the *Ekonomisk Tidskrift*, in 1921, for calling attention to one or two inaccuracies in regard to the laws referred to above, as quoted in the first edition. Mr. E. L. Hargreaves has given an excellent exposition of the complications involved in the settlement in his book, *Restoring Currency Standards* (P. S. King, 1926).

[3] Stourm, ii., p. 384.

The end of the mandats was the end of the Revolutionary paper money. But that did not mean that the Government paid cash. Contractors received "*ordonnances*," the holders of rentes received two-thirds of their capital in "*bons des deux tiers mobilisés*," and interest on the remaining third in "*bons d'arrérages*," requisitions for the army were paid for in "*bons de réquisitions*." All these were obligations to pay in cash, but obligations with no definite date of maturity. Sometimes by corrupt means the holders could get them paid on grounds of "urgency." Sometimes they had to wait. Like the assignats and mandats, these instruments could be used in payment for the *biens nationaux*. Like them, they depreciated (though not quite to the same extent). But there was one vital difference; they were not legal tender. Contracts were made exclusively in metallic money, and the vagaries of Government finance no longer deranged the money of account. Thus was the way prepared, amid all the financial humiliations of the Directorate, for the sound system inaugurated by Napoleon.

Much has been written of the fallacies inherent in the issue of the assignats. They were supposed to be "based" on the public lands, but were not, in fact, convertible into land or anything else of value. There was no definite relation between the total value of the public lands and the total amount of the circulating medium which the French people needed. In reality, the sale of a capital asset like land is as much limited as the issue of loans in its power of attracting *bona-fide* savings from the public The failure of Necker's loans in 1789 proved that surplus savings were not available, the ordinary revenues were drying up, and inflation was the sole resource remaining for providing the means of payment.

While the history of the assignats illustrates almost every possible phase in the abuse of paper money, the period of their decline is in some ways the most interesting and instructive. It is really astonishing that the agony should have been so prolonged. How did it come about that people still went on using paper money for a year or more after coin had been restored *de facto* to its position as the principal medium of exchange? The Government, of course, insisted on paying in paper, but how was it that people were induced to accept it (apart from the unfortunate *rentiers*, who had no choice)? Probably the explanation is that some people were willing to speculate on the Government being induced to do something to save the assignats. The Jacobins always remained faithful to the currency of the Revolution. Ordinary political leaders are fairly free to change their minds, and nobody blames them much for dropping a policy for which they have striven. But a faction which has enforced its policy by bloodshed cannot so easily disavow its past. To admit that all or any of the causes for which 20,000 men and women were done to death were wrong is to assume too great a burden of guilt. The Jacobin leaders probably did not like being called "drinkers of blood" by their opponents, and this was an unpleasantly effective political cry. To retain their self-respect, they were impelled to contend that what they had done had been really necessary, that the measures taken during the Terror had saved the Republic, and that any evils that had followed were due rather to the weakness of their successors than to their own errors. From the obduracy so thrust upon them sprang that loyalty of the Jacobins to the assignats which gave hope to the speculators. The *rentiers*, contractors, Government servants, and others who were paid in assignats would not keep them longer than necessary; even a week's delay might cause a perceptible loss. On the Bourse and at the bucket shops of the *Jardin Egalité* those who were in haste to rid themselves of this tainted paper could deal with the speculators who were prepared to buy it up on the chance of political favours from the Jacobins. The outcry against speculators was incessant and intense. But it was only the speculators who gave any support at all to the assignats when every one else was discrediting them by spending them the moment they were received.

The Jacobins made more than one effort to justify the speculators' hopes. The ephemeral decree of June, 1795, for the sale of lands at seventy-five years' purchase of the value of 1790 was one example ; the exchange of assignats for mandats at the ratio of 1 to 30 was another.

We have seen how the aggregate metallic value of the assignats in circulation shrank. From 1500 millions in November, 1794, it had dwindled a year later to 150 millions, and at the end was hardly 100 millions. Even of this reduced total the greater part had probably by that time found its way into speculative holdings, so that the quantity kept for currency purposes must have been very small.

CHAPTER XVIII.

THE BANK RESTRICTION OF 1797.

THE currency difficulties in England differed completely from those of France, occurring as they did in a highly-developed credit system which had already been adapted to finance a great mercantile and industrial organisation, and the continuity of which was disturbed by no revolutionary outbreaks. In the preceding generation, to the credit facilities provided by the Bank of England for the great London merchants, there had been added a network of country banks providing similar facilities all over provincial England. The banks, like the Bank of England, issued notes. They also received deposits, but cheques had not yet come into such general use as to make a deposit on current account a convenient medium of payment. This extension of banking was naturally not exempt from those disagreeable evidences of the instability of credit, periodical financial crises. One such crisis had occurred in 1783, and after an interval of ten years credit was in a state of dangerous inflation when the outbreak of war, with the consequent revision of values, in January, 1793, precipitated another. At that time Bank of England notes did not circulate to any great extent far from London, but the country banks held part of their reserves either in Bank of England notes or in deposits kept with London banks. There were no bank notes below £5 and (till 1795) no Bank of England notes below £10. There was very little silver coin, and for the all-important purpose of the payment of wages and for retail purchases gold coin (guineas and half-guineas) was indispensable, and the characteristic of a crisis was always an urgent demand upon the Bank of England for gold to be sent out to the provinces. The usury laws, limiting interest to 5 per cent., were a serious obstacle to an efficient control of credit. In 1793 the Bank of England endeavoured to cope with the crisis by restricting credit ; it refused to lend. The natural result followed : solvent firms were threatened with failure. The Government intervened and obtained statutory powers to make advances to merchants. The advances were not made in cash, which the Government could only have obtained from the Bank itself, but in Exchequer bills. The merchant, embarrassed with a stock of commodities on which no banker would lend, was thus provided with a security which he could get discounted. Having gained the power of borrowing, he could afford to see his cash balances fall, and the demand for guineas was relaxed. In the end the whole amount of £2,202,000 advanced by the Government was repaid by the borrowers.

At the beginning of the war there was no appreciable financial strain on the Government. The financial year in those days ended in October. In the year 1792-93, which included eight months of war, little was borrowed, and in 1793-94 only about 10 millions (the revenue being about 18 to 19 millions). It was in the course of 1794-95 that the difficulties began. In that year the deficit met by borrowing was 20 millions, besides a guaranteed loan of £4,600,000 raised for the benefit of Austria, and in the following year it was necessary to borrow 25 millions. In those days such loans put a severe strain on the national resources. From time to time Pitt was compelled to ask for advances from the Bank. The Bank was prepared to go a long way to accommodate the Government, as it had done before in time of war. But in the spring of 1795 the foreign exchanges showed an ominously unfavourable tendency. The practice prevailed of financing the forces abroad by means of bills drawn on the Paymaster-General or the Treasurer of the Navy, and payable at the Bank of England. When the bills arrived the Bank was expected to provide the money to pay them, and statutory authority had recently been obtained for the advances made by it for this purpose. The perpetual arrival of new bills, for the payment of which the Government had made no separate provision, was the cause of growing misgiving to the Bank, and led the Directors to make repeated protests to Pitt—protests which grew in urgency as the foreign exchanges became more adverse. The Directors urged him to keep down the advances for the purpose of meeting these bills to a maximum of £500,000 outstanding at any one time. In practice this was an ideal never attained: at times they exceeded £2,000,000.

At that period the most important of the London exchanges were those on Hamburg and Lisbon. Lisbon was important because most of the new supply of gold came from the mines of Brazil and travelled *via* Portugal. Hamburg was important as being the great interpost for the trade of Northern Europe. In normal times the exchange on Paris was quite as important, but though war did not necessarily interrupt the quotation of the exchanges between the belligerents (and, indeed, the Paris exchange was regularly quoted in London from 1803 to 1815), this exchange was not quoted between October, 1793, and April, 1802. Amsterdam was seized by the French in 1795.

Germany and the other countries of which Hamburg was the commercial centre had silver currencies, and the Bank of Hamburg only gave credit for silver, gold being bought in the Hamburg market as a commodity. There was, therefore, no real par of exchange with London. For the purpose of quotations there was an assumed par price of gold, six "marks banco" (or 96 stivers) to the gold ducat. This price, making the ratio of gold to silver 14·74 to 1, had become too low. In 1795 the ratio had reached that of 15½ to 1, instituted in the French coinage by Calonne ten years before. The London exchange was quoted in schillings and grotes, banco, to the pound sterling (a schilling of 12 grotes being 6 stivers, or ⅜ mark banco). At 96 stivers to the ducat, the gold in £1 was worth 34 : 2 banco. At the ratio of 15½ it was worth 35 : 11. Allowing for interest for 2½ months, a bill on Hamburg was at par when the exchange was a little over 36. In the years 1795 and 1796 the *lowest* price of gold quoted in Hamburg was 98½ stivers, making the par 35. In the first quarter of 1795 the exchange averaged 35 : 7 ; in the second quarter it had fallen to 33 : 10½, and in the third it was no more than 32 : 5½. In October the Lisbon exchange, of which the par was 67⅓d. to the milreis, rose to 71½, representing nearly as great a depreciation of sterling as in Hamburg.

At last, in self-defence, the Directors of the Bank, recognising that the needs of the Government must remain paramount, decided that they must restrict trade discounts, and on 31st December, 1795, they adopted a resolution limiting the total amount of bills to be discounted each day for their customers other than the Government. If on any day the bills presented for discount in the aggregate exceeded the limit laid down, a proportion of the bills presented by each applicant were to be returned on his hands. Apart from the advances to the Government, this Procrustean reduction of discounts gave the Bank complete control over credit, and at the same time the advances to the Government (of which the obnoxious advances on Treasury bills in reality formed quite a moderate proportion) were themselves steadily reduced. Having exceeded £12,000,000 on December, 1795, they were reduced to less than £9,000,000 in September, 1796. But it was not till October, 1796, that the foreign exchanges were restored, and even then the Bank was not relieved from the drain of gold. At last, in February, 1797, the signs of a crisis appeared. An invasion scare precipitated it, and the gold stock of the Bank, already seriously depleted by the strain of the preceding two years,[1] began to melt away. The Government came to the conclusion that the Bank could not stand the strain, and they obtained an Act of Parliament stopping the payment of its notes in cash.

It might, perhaps, be thought that this crisis bears its explanation on its face. Did not the Bank Directors go to the root of the matter when they pressed Pitt again and again to keep down his demands for temporary advances ? No doubt they were right in attaching so much importance to this, but a glance at the actual variations which occurred in these advances will show that the explanation of the crisis is not to be found in them. In 1793, the first year of the war, they averaged a little over £9,000,000. In 1794 they were lower, the average being about £7,500,000. At the beginning of 1795 they rose quickly and exceeded £11,000,000, and, except for a temporary rise to £12,800,000 in December, 1795, they varied between £8,700,000 and £11,500,000 until the suspension of cash payments in February, 1797. At the moment of the crisis the advances were £10,600,000. Now, in 1791 and 1792, under peace conditions, the advances had exceeded £9,000,000, and it is perfectly obvious that they could be increased to 11 or 12 millions in time of war without threatening a financial cataclysm. Indeed, while the Bank Directors were right to insist on the limitation of advances, it may fairly be contended that Pitt in substance complied with their demands. Though the inconvenient bills drawn abroad were constantly above the stipulated limit of £500,000, the advances as a whole were not excessive.

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[1] It had been 6¾ millions in August, 1794 ; 2½ millions in December, 1796 ; and fell to 1¼ millions on 25th February, 1797.

But what specially agitated the Bank Directors at the time was that so large a part of the money raised by the Government was spent abroad, either on subsidies or guaranteed loans to our allies or on the maintenance of our own forces.

Professor Silberling has produced a most valuable statistical study in his articles on the "Financial and Monetary Policy of Great Britain during the Napoleonic Wars,"[1] and he shows that the actual total remittances for the British armies in Europe and for subsidies, etc., to foreign states was £5,300,000 in 1794, £9,400,000 in 1795, and £4,500,000 in 1796. Undeniably these remittances would have an unfavourable effect on the exchanges, an effect intensified in 1796 by exceptional importations of foreign corn, on account of which Professor Silberling adds on £2,500,000 to the remittances of that year.

But after allowance has been made for the mitigating effects of the reactions set on foot by war taxation and borrowing, such as the diminution in the expenditure of the taxpayers, the borrowing abroad and the curtailment of external investment, the magnitude of the external expenditure does not seem to be sufficient to explain the crisis. So long as war expenditure is financed with genuine money, provided by a diminution of private expenditure, and not with inflated bank credits, the effect of even large remittances abroad will be moderate. It will be no greater than that of the investment of the same amount abroad in peace time.[1]

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[1] *Quarterly Journal of Economics*, vol. xxxviii., February and May, 1924.

Sir Francis Baring, writing in 1797, stated that the war loan of 1796 had been taken by subscribers of insufficient financial standing, who " had recourse to circulations, operations on foreign places, and other expedients to enable them to make good their payments, which produced some effect on the course of exchange, but still more on the rate of interest in the country, which was soon pushed beyond what is allowed by law to be received." In so far as loans were raised from people who could not pay for them without borrowing, there would, of course, be a tendency towards unsound conditions. But if the subscribers succeeded in obtaining credits abroad, as Sir F. Baring suggested, the effect on the exchanges would be *favourable*—at any rate so long as the foreign credits were not called in. And in any case the disturbance of the exchanges occurred long before the war loan of 1796 was issued.

The critics of the Bank blamed the Directors for restricting discounts. The Bank restricted discounts in order to keep down its note issue. Some of the witnesses before the Secret Committee of the House of Lords, appointed immediately after the crisis, argued that the demand for guineas was due to this cause. Trade must have some means of payment ;

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[1] Professor Silberling objects to this principle on the ground that " capital flows abroad in peace time because there is a surplus of it seeking a profit ; remittances have to be made in the emergency of war irrespective of conditions in the capital market. . . ." *loc. cit.*, p. 232. The distinction, however, is not a real one. Once the investor *has* decided to send capital abroad, the burden on the exchange is exactly the same as if the Government were compelled to send the same amount. The investor sends capital out of his " surplus," but *so long as there is no inflation* the Government creates a surplus in its own hands by taxation and borrowing.

bank notes will do, but if they are not forthcoming, the only alternative is to ask for guineas. The country banks, it was said, restricted their issues in sympathy with the Bank of England, and hence the drain of gold. This argument is palpably wrong. The guineas were drawn out in exchange for bank notes. It is true that a curtailment of borrowing facilities leads traders to hold larger balances, but those balances may just as well be in credit as in money. The demand for gold in exchange for credit must have been due to one or all of three causes—a need for gold for export, a need for gold as a means of small payments, especially payments of wages, or a loss of confidence in the banks. A loss of confidence in some of the country banks there may well have been; failures among them were frequent enough. Bank of England notes did not circulate much outside London, and such loss of confidence in the local banks would probably lead to a demand for guineas. But this loss of confidence itself calls for explanation.

Why, then, should the banks have been in difficulties? Why should gold have been exported? Why should guineas have been in demand for internal circulation? No petty little movements will be enough to explain so great a crisis.

The fact is that the financial situation in England, even in 1797, cannot be adequately studied in isolation from the financial situation on the Continent. For the first two years of the war the foreign exchanges were highly favourable to London. This was the period of the Terror in France, when the assignats were forced into circulation by all the rigours of the Committee of Public Safety, when the possession of a hidden hoard of gold or silver was a criminal offence, when every one who had wealth in France was anxious to send it abroad. The countries adjacent to France were soon saturated with specie, and England got her share, as is shown by the exceptionally heavy purchases of foreign gold for the Mint in 1793 and 1794. The total for these two years was $3\frac{3}{4}$ millions, as compared with a normal average of about £650,000 a year. And, of course, more foreign gold was imported than was brought to the Mint.

The fall in the exchanges began in the spring of 1795. The exchange on Hamburg, which was above 36 at the end of March, fell in six weeks to 33 : 6, and in August to 31 : 10. Even at 33 : 6 it was already profitable to send specie thither, and in August it was profitable also to send it to Lisbon. This is just the time at which France was returning to a metallic currency. The Law of the Maximum, the foundation of the whole system of assignats under the Terror, was repealed on 24th December, 1794. In January, 1795, a difference began to be made (contrary to law) between specie prices and paper prices, and soon there followed ever-growing complaints that farmers or merchants, first of all in the provinces and afterwards in Paris, refused to accept assignats at all. The laws limiting dealings in gold and silver were partly abrogated, partly ignored. By the end of the year the hopelessly discredited assignat had become an object of speculation rather than a means of payment. In the course of 1796 the Revolutionary paper money was practically demonetised. In July, 1796, it was stated that specie, though scarce, was sufficient to meet the requirements of the markets, and specie prices were beginning to rise.

How intense was the pressure to send gold to France during this period of return to a metallic currency is proved by the quotations of the foreign exchanges on the Paris Bourse. For the period from 23rd August, 1795, to 22nd February, 1796 (except for an interval from 14th December, 1795, to 13th January, 1796, when the Bourse was closed), the pages of the *Moniteur* give us an almost complete series of daily quotations of the prices of gold and silver and of the exchange on Hamburg and some other places. The following table (p. 328) shows the monthly averages. The assignat being then in its death agony, and valued at only a small fraction of its face value, each quotation is given at *so many times* the par value.

When it is remembered that throughout these months the Hamburg exchange was from 8 to 10 per cent. against London, it will be seen how enormous was the profit to be made by importing guineas from London to Paris. It was possible

	French Gold Coin.	Foreign Gold Coin.	Hamburg Exchange.	Premium on Gold over Exchange.
Aug., 1795	40·83	40·85	39·30	3·9 per cent.
Sept., ,,	47·94	47·99	39·82	20·4 ,, ,,
Oct., ,,	73·83	76·05	62·54	21·6 ,, ,,
Nov., ,,	129·83	—	117·88	10·1 ,, ,,
Dec., ,,	172·85	—	156·97	10·1 ,, ,,
Jan., 1796	218·99	—	197·31	11·0 ,, ,,
Feb., ,,	257·42	—	244·76	5·2 ,, ,,

on 20th September, for example, for a man who wanted gold coin in Paris either to buy it at 4650 livres per French ounce (472⅛ grains English), or to buy a bill on Hamburg at 7350 livres per 100 marks banco, to sell the bill in London for guineas at about 33 schillings (12⅜ marks) to the pound sterling, and to smuggle the proceeds across the Channel. As every 100 marks banco yielded more than £8 in English gold, equivalent to 2·1 French ounces, he would get 9765 livres' worth of gold, leaving a margin of 2415 livres to pay for the cost and risk.

But to appreciate the full significance of these figures it is necessary to understand that September, 1795, was precisely the month in which the Bank of England first began to suffer a drain of specie. This was expressly stated in the Report of the Secret Committee of the Lords, and confirmatory evidence is afforded by the actual text of the repeated remonstrances submitted during the year by the Bank to Pitt. By August these remonstrances had become very grave, yet no actual reference was made to any loss of specie before the urgent warning addressed to him on 8th October, when the price of *bullion* (on which the premium in Paris was less than on coin) was stated to be £4 3s. to £4 4s. per ounce.

The demand in Hamburg and Lisbon for specie from England, which remained intense for practically a year, was merely a reflex of the demand in France. The Secret Committee of the Lords obtained from the Customs statistics of the export of gold bullion. The exports recorded in 1795 and 1796 were almost negligible. At first sight this seems to show that, whatever the intensity of the demand for gold on the Continent, England escaped with a trifling loss. But the Customs figures are really worthless. The export of guineas, or even of gold melted down from guineas, was prohibited, and though gold melted from guineas was often exported with a false declaration, it was also often exported secretly. When receiving a deputation from the Bank on 5th February, 1796, Pitt mentioned that, according to the British resident at Hamburg, a large consignment of guineas had been sent thither in the packet from Yarmouth, and melted down. As the direct demand came from France, it seems probable that much of the gold was surreptitiously sent across the Channel. There would, of course, be no Customs declaration of gold so shipped to an enemy, even if it were not in guineas. By April, 1796, the Hamburg exchange was no longer quite so unfavourable, though it did not rise consistently above the export specie point till the autumn. The Lisbon exchange, which was less important, was very adverse all through the summer of 1796, and only fell to par in October. The slow effect of the drastic contraction of discounts put into operation by the Bank in December, 1795, shows how great was the pressure to be resisted. But even when the export of gold was stopped the crisis was not over. The large additions made before the turn of the tide to the stock of gold had had the effect of stimulating and hastening the revival of trade, which was in any case likely to follow the crisis of 1793. According to Professor Silberling's index number, prices, which had risen from a level represented by 102 in 1792 to 109 in 1793, had stopped short at 107 in 1794, and then sprang up to 126 in 1795 and 136 in 1796. Certainly a part of this sensational rise of prices was due to war conditions, which created new demands and interrupted various sources of supply, but there is no doubt at all that it was in part due to credit expansion. Though it was said that the country banks had not increased their issues to the level of 1792-93, it was recognised that a great part of the reduction which then occurred had been recovered.

The sequence of events was exactly what might be expected. First an influx of gold, then an expansion of credit, then a demand for legal tender money for internal circulation, a demand which could only be supplied by guineas. But for the violent movements of gold on the Continent, the demand for guineas might have been supplied without any excessive strain on the Bank. The coincidence of the external and internal demands for gold necessitated the restriction of discounts by the Bank of England. Credit was successfully contracted, the foreign exchanges were turned in favour of London, but, as usually happens, the internal demand for guineas was not immediately stemmed. At the same time, the contraction of credit meant a fall of values; Silberling's index number shows a fall from 143 in the first quarter of 1797 to 136 in the third. A fall of values means the failure of merchants, and the failure of merchants means the failure of banks. Hence the loss of confidence, which accentuated the demand for guineas. But the actual number of failures in the year was not very much above the average, and was far below the heavy total of 1793. The distrust by itself would have produced little effect but for the persistent drain of gold to which the banking system of the country had been previously exposed. When the crisis came, it was appeased not by special advances of credit such as were made by means of the Exchequer bills in 1793, but by the issue of Bank of England notes of small amounts (one and two pounds), such as could take the place of gold in the payment of wages and in retail transactions.

It is a curious feature of the Bank restriction that the notes of the Bank were not made legal tender till 1812. They were accepted by the Government in all payments, and the principal merchants and bankers formally agreed together to accept them. This was enough to establish them as the accepted means of payment, although legally they were nothing more than debts of the Bank of England, which the Bank was expressly forbidden by law to pay in legal currency. The restriction was ostensibly temporary, but was prolonged from time to time. The Peace of Amiens in 1802 did not bring it to an end, and on the renewal of war in 1803 it was enacted that the restriction should last till six months after the end of the war. In 1811 (when the controversy raised by the report of the Bullion Committee was in full swing) Lord King demanded payment from his tenants in coin as being the sole legal tender. Even then the bank note was not immediately made legal tender, but an Act was passed forbidding any differentiation between coin and paper, so that paper, if it circulated at all, as it was bound to do in the almost complete absence of coin, could only circulate, or discharge a debt at par. This insured that the money of account should be tied up with bank-paper and not with gold. At last in the following year bank notes were expressly made legal tender; they were to be "good and sufficient payments in the law" in pursuance of any order of a court.

After the crisis of February, 1797, the effect of the contraction of discounts, which had been in operation all through 1796, made itself felt on the internal drain as it already had some months before on the external drain of gold. Confidence was quickly restored, and the foreign exchanges grew more and more favourable, the usual consequences of the contraction of credit and lowering of values in a country which has passed through a crisis.

At the time, however, it seemed paradoxical that the English crisis was hardly over, and the currency definitely established for the time being on a paper basis, before the Hamburg exchange started rising. By April it was above 36, and by August above 37. In December it touched the quite exceptional maximum of 38 : 5. For 1798 the average was 37 : 7½, and the exchange remained consistently above 37 till the spring of 1799. In the first instance, London had suffered more severely from the French demand than Germany. Notwithstanding hostilities, proximity had counted for something, and, since the adoption of the ratio of 15½ to 1 in 1785, gold was no longer under-valued in France as compared with silver. War finance weakened the Bank of England's power of resistance, and the English credit system succumbed first. But the German system did not outlast it for long. In the summer of 1799 the inevitable collapse came. There were many failures, and such was the stringency that the exchange, which had still been at 36 in June, had fallen to 32 by the beginning of October and to 30 in the following year. In May, 1800, gold began to be quoted at a premium in London, the price being £4 5s. an oz., or 9 per cent. above the Mint price of £3 17s. 10½d.

This was the beginning of the depreciation of the Bank of England note. It is not easy to find a satisfactory measure of the depreciation. Three tests may be applied: the prices of bullion and specie, the foreign exchanges, and the prices of commodities. The first is the most direct. The premium on gold measured the departure from the gold standard. But gold was needed only as the means of remittance, and as nearly all our trade was with silver-using countries, the gold market was in an artificial condition. For long periods there was no market at all. There was no quotation from March, 1802, to April, 1804, nor from October, 1805, to February, 1809. Silver is therefore a better test than gold. We have a nearly continuous series of quotations either for standard silver bars or for Spanish dollars, or for both. The ratio of gold to silver always gravitated towards that of 15½ adopted in France, at which the price of standard silver was 60·84d. and that of Spanish dollars 59·3d. an ounce, and the premium as compared with these prices gives a fair approximation to the measure of depreciation. Silver and gold, however, being both merely the means of remittance, the market for them was practically one with the market for foreign exchange, in so far as the foreign currencies dealt in were on a specie basis. Portugal, which had been important as the channel through which Brazilian gold reached Europe, lapsed into a paper-money régime. Amsterdam, after the French invasion, lost much of its business as a great financial centre. There remained, as the principal exchange markets on the Continent, Hamburg and Paris. From 1802 onwards the London exchange on Paris was regularly quoted, notwithstanding the war; nor was the quotation of the London exchange on Hamburg suspended during the French occupation. But war plays havoc with specie points. In 1810 the actual cost of sending silver between London and Hamburg was estimated at from 1½ to 2 per cent., but insurance, which in peace was about 10s. 6d. per cent., was an incalculable factor; it might be 4 per cent., or more or less. In 1811 the average price of silver dollars in London was under 6s. an oz. For £1 it was possible to purchase $3\frac{1}{3}$ ozs., containing 3 ozs. of fine silver, which at Hamburg would be worth about 11 marks banco, or 29 schillings 4 grotes. For the same year the exchange on Hamburg averaged 24 : 11, so that a profit of nearly 18 per cent. was to be made by sending silver. In some other years at about the same time the disparity, though not so great, was still substantial, the explanation being undoubtedly that Napoleon's Continental system threw obstacles in the way of the transmission of silver. Contemporaneously, the exchange in London on Paris was in as artificial a condition.

For these reasons the prices of the precious metals and the foreign exchanges do not give an unquestionable measure of depreciation. There remain the prices of commodities. An index number measuring the purchasing power of money, is in some respects the most perfect test of depreciation. But it does not pretend to measure the deviation from the metallic standard. And in constructing an index number we have to be content with such price records as we can get. Index numbers do not distinguish between a rise of price due to scarcity and a rise due to currency inflation, and during the latter years of the war prices were violently disturbed by the desperate economic warfare. Jevons obtained a series of index numbers from the statistics of prices collected by Tooke in his *History of Prices*, but a much more valuable series has recently been calculated by Professor N. J. Silberling.[1]

Jevons calculated both paper and specie prices. The actual quotations were, of course, in paper. From them he obtained the specie prices by abating the premium on gold, but unfortunately he used a table of average prices of gold given by Tooke, which was, as he himself suspected, inaccurate. The inaccuracy was more serious even than he supposed, for neither he nor the other writers who used Tooke's figures seem to have observed that they refer to the year ending 1st February, with the result that they are practically one year wrong; so that, for instance, to the year 1816, when the maximum price of gold as returned to the Committee of 1819 was £4 2s. and the average barely £4, is attributed an average of £4 13s. 6d.[1]

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[1] See the Harvard *Review of Economic Statistics* for October, 1923, pp. 223-61.

However, the long intervals when the quotations for gold were either non-existent or nominal make it impossible to construct a table of specie prices on the basis of the price of gold alone. When both gold and silver were quoted, their prices usually correspond nearly to the prevailing ratio of 15½, and therefore the price of silver may be taken as a fairly trustworthy test of specie prices. In the following table are shown the prices of gold and silver and of bills on Hamburg and Paris, expressed on a percentage basis, par in each case being £100. The last three columns show Professor Silberling's index numbers of prices, the computed prices in silver, and the ratio of gold to silver at Hamburg.

The statistics show a general tendency towards increasing depreciation, reaching a maximum rather before the end of the war. But this general tendency is broken by very considerable fluctuations. The maximum index number for paper prices comes in 1814, and for specie prices in the years 1809 and 1814. The maximum depreciation as tested by the foreign exchanges comes in 1811. As tested by the prices of gold and silver, it comes in 1813, the last complete year of war.

The depreciation begins, as we have seen, with the Ham-

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[1] In his *Thoughts and Details on the High and Low Prices* (1823) Tooke heads the table "Account of the average market price of gold . . . from February, 1800, to February, 1821, extracted from Mr. Mushet's tables," but in his *History of Prices* (vol. ii., 1838) he omits all mention either of February or of Mr. Mushet, and describes the table as "from official documents." The tables are in Mushet's pamphlet "Gain and Loss to the Fundholder" (1821). They run from February, 1797, to February, 1821, and Mushet's examples show that he means from the year ended 1st February, 1797, to the year ended 1st February, 1821, inclusive. In the second edition of his pamphlet Mushet gave corrected figures, differing in some cases by several shillings per ounce from those in the original table. But Tooke was content with the uncorrected figures, which he copied without noticing an arithmetical error in the calculation of the percentage of depreciation for one year (1812). From him writer after writer has copied the table without noticing the error, and without knowing that the figures refer to the year ending February. Both editions of Mushet's pamphlet are to be seen in the Goldsmiths' Library, University of London.

PERCENTAGE VALUES.

	Gold.	Silver.	Exchange on Paris.	Exchange on Hamburg.	Commodities.		Ratio of Gold to Silver at Hamburg.
					Actual prices.	Specie prices (Silver).	
Par.	£3 17s. 10½d. per oz.	60·84d. per oz.	25·22 Fr. per £.	36s. banco per £.	Prices of 1790.	Prices of 1790.	
1797	100·0	102·6	—	98	141	138	15·41
1798	100·0	100·1	—	96	149	149	15·59
1799	—	106·7	—	103	156	146	15·74
1800	107·0	113·5	—	113	159	140	15·68
1801	109·0	117·3	—	113	166	142	15·46
1802	—	113·7	105·7	109	143	126	15·26
1803	—	111·9	102·9	105	156	139	15·41
1804	103·0	108·3	100·1	101	153	141	15·41
1805	103·0	107·4	98·8	103	160	149	15·79
1806	—	110·5	103·0	105	157	142	15·52
1807	—	110·2	103·5	104	152	138	15·43
1808	—	107·1	108·4	106	166	155	16·08
1809	—	110·4	123·3	121	176	159	15·96
1810	—	113·9	121·6	120	176	155	15·77
1811	123·9	120·7	139·1	144	158	131	15·53
1812	130·2	126·5	131·2	128	163	125	16·11
1813	136·4	136·7	128·6	130	185	135	16·25
1814	124·4	124·3	116·4	119	198	159	15·04
1815	118·7	117·5	115·6	114	166	141	15·26
1816	102·9	100·9	99·6	100	135	134	15·28
1817	102·2	104·3	102·0	102	143	137	15·31
1818	104·6	106·5	104·3	105	150	141	15·35
1819	102·3	104·7	102·7	102	136	130	15·33

Note.—The figures for gold, silver, and the foreign exchanges are based on the Appendices to the Reports of the Lords and Commons Committees on the Resumption of Cash Payments in 1819. Before 1811 the quotations for gold are spasmodic, never covering a complete calendar year, and the averages are therefore not reliable. For a number of years the figures for silver are based not on standard silver, but on dollars (with a par of 59·3d.). The ratios in the last column are taken from Soetbeer. The foreign exchange columns give the *premium* on francs and banco money—i.e. the pars ought strictly to be given as 9·515d. to the franc, and 6⅔d. to the banco schilling.

burg crisis of 1799. It is not cured by the ephemeral Peace of Amiens. The preliminaries of peace were signed in October, 1801, when the price of standard silver was between 5s. 9d. and 5s. 11d. Upon the conclusion of the definitive treaty

(25th March, 1802) it fell to an average of about 5s. 6d., recovering to 5s. 7d. at the end of the year. At its lowest, 5s. 5½d. in July, it was still 8 per cent. above par.

The renewal of war in May, 1803, saw no appreciable rise, the average for the year being 5s. 7·27d., and the average for 1804 was even lower, for the mean quotation for dollars (there being no market for standard silver) was 5s. 4·2d., corresponding to about 5s. 6d. for standard silver. In 1805 dollars fell to 5s. 3·67d. Commodities, on the other hand, fell abruptly on the cessation of the war and rose again to a slight extent on its resumption. The interpretation of these movements is simple. The recovery on the Continent from the crisis of 1799 was easing the strain on the English paper currency, though the upward tendency of specie prices is masked by the effects of war and peace on markets and on the sources of supply. The depreciation which was caused by the stringency at Hamburg disappeared with its cause. Till 1808 the premium on silver was appreciably greater than the premium on foreign exchange, a sign that specie was flowing away from Hamburg, and that credit was recovering on the Continent. During these years the depreciation was no longer important. From 1803 till November, 1808, the exchange on Hamburg never dropped below 32 : 9, and for the most part was above 34. In August, 1808, it was above 35. By November it had fallen to 31 : 3. In 1809 it averaged only 29 : 9.

The Continental blockade was already beginning, but still in a mild and incomplete form, English goods being smuggled into the Continent in large quantities through both Holland and Hamburg. English traders sought for new openings in the newly-freed commerce with Spanish America, to compensate them for the partial closure of the Continental markets. After the period of caution which had just passed, there was plenty of room for credit expansion, and the growing depreciation of the Bank of England paper showed that the credit expansion in England, being free from the trammels of convertibility into specie, was outstripping that on the Continent. For the first quarter of 1810 the Hamburg exchange averaged barely 29. Then came the catastrophe. First, embarrassment arose from the disappointing results of the South American trade. Credit began to contract, and the exchange on Hamburg rose suddenly in April to 31. In July, Napoleon, seeking to complete his system of exclusion, annexed Holland; in August he imposed a prohibitive tariff on colonial products, such as had been so liberally smuggled in; in December he annexed Hamburg and Oldenburg. Partly as the inevitable reaction after the feverish activity of 1808 and 1809, partly as the result of the increased severity of the Continental system, the second half of 1810 was marked by a violent financial crisis in England. Meanwhile the credit expansion abroad continued a few months longer, fostered by the exclusion of British goods and consequent protection of Continental manufacturers. Europe was for the most part on a specie basis, and a more violent contraction of credit occurred there than in England. The crash came at the beginning of 1811. Failures occurred throughout Germany, Holland, and France. In England the prices of commodities, as measured by Professor Silberling's index numbers, fell from 184 at the beginning of 1810 to 152 in the third quarter of 1811. On the Continent the fall must have been far greater. The average exchange on Hamburg fell from 29 : 11½ in 1810 to 24 : 11 in 1811; that on Paris from 20·73 to 18·13. The rigorous exclusion of British goods had the same adverse effect on the exchanges as a prohibitive foreign tariff, but this effect was accentuated by the extreme financial stringency at Hamburg and elsewhere. The crisis of 1811 is the explanation of the great depreciation of the Bank of England note in that year, just as the crisis of 1799 is the explanation of the first period of depreciation. Early in 1812, even before the relaxation of the Continental system, the exchanges began to be less adverse For the first quarter of the year the Hamburg exchange averaged 27 : 10, and that on Paris 19·50. But the depreciation was still great. A paper currency permits of a more lenient treatment of a crisis than a metallic currency, and English traders had got off more lightly than their Continental neighbours, advances being made in Exchequer bills as in 1793. But the country paid the penalty in a continued redundancy of currency. For the moment this redundancy facilitated a quick and rather fictitious recovery. The creation of credit was stimulated by the crumbling of Napoleon's power and the prospect of access to European markets. But as credit expanded, the depreciation of the currency again became more marked. It is true that the rates of exchange were not so adverse as in 1811, but the prices of gold and silver rose to their maxima at the end of 1813. Gold was quoted at £5 10s. and even £5 11s.; silver dollars rose to 7s. an ounce. This depreciation was a sign that the financial system of the country was over-strained. The Government securities held by the Bank of England rose from £21,165,000 in August, 1812, to £25,591,000 in August, 1813, and £34,982,000 in August, 1814. In other words, in two years nearly £14,000,000 of the war expenditure had been met by the creation of bank credits.

Only peace could restore the currency, and peace was at hand. Napoleon abdicated in April, 1814. At the beginning of June the price of gold had fallen to £5. For the last six months of 1814, it averaged £4 7s. But this rise in the gold value of the pound was reflected in a fall in the money prices of commodities. The *average* level of prices for 1814, indeed, was slightly higher than in 1813, but the maximum was reached early in the year. The index number fell from 211 in the first quarter of 1814 to 170 in the first quarter of 1815. Merchants who had speculated on the re-opening of the Continental markets quickly found themselves involved in loss. The process of recuperation on the Continent after the crisis of 1811 had been delayed by the war, which had raged on a scale never known before. As the tide of invasion closed in, first over the outer boundaries of the Napoleonic empire, then over France itself, credit operations dwindled almost to nothing. The portfolio of the Bank of France amounted at last in April, 1814, to no more than 1,715,000 francs.

With credit dried up, the Continental demand for goods was in abeyance. The result was a financial crisis in England, the aftermath of that of 1810. The advances to traders, which had then relieved the situation, had really only postponed the crash. The fall of values to the Continental level had been held off at the cost of a depreciation of the currency.

The effect of the advent of peace upon the currency was so powerful and so sudden that it requires explanation. The key is to be found in the expectation that the Bank Restriction would expire in a few months' time. As the law stood at the beginning of 1814, the restriction was to cease automatically six months after the conclusion of a definitive treaty of peace. That event occurred on the 30th May, 1814. The arrangement was modified by a bill introduced at the end of June and passed in July, which fixed the 25th March, 1815, as the date of resumption. Ministers intimated that this was a tentative measure, and that the question of definitive resumption could be better dealt with after a few months' experience of peace conditions.

Cautious as this statement was, the gold and foreign exchange markets were violently upset. The price of gold dropped from £5 at the beginning of June, to £4 10s. at the end, and after some disorganisation and nominal quotations it settled down to £4 6s. in September.

The expectation that the pound would return to parity led to speculative holdings of sterling. That meant that dealers in commodities were eager to sell and unwilling to buy, unwilling to borrow and eager to repay. Markets were depressed and velocity of circulation diminished. Hence the crisis.

Before the 25th March, 1815, arrived, fresh legislation had been obtained prolonging the Restriction to the 5th July, 1818. But by that time the depression had caught hold both of the commodity markets and of the foreign exchange market.

In March, 1815, Napoleon escaped from Elba, and the renewal of war immediately caused a renewed depreciation of the bank note. Gold, which had been at £4 8s. in February, reached £5 7s. in April, and was still at £5 5s. when the Battle of Waterloo practically finished the war. By September it had fallen again to £4 8s. Markets returned after the crisis to much the same state as before it. The contraction of credit in England continued. In three weeks the price of gold fell to £4 3s. (13th Oct.), and at the end of the year it was at £4 2s.

Meanwhile, credit was at last reviving in Europe. By October, 1816, the Bank of England was buying gold at £3 18s. 6d. It was offering this price with a view to accumulating gold for an early resumption of cash payments; if it had left the market to find its own level, gold would have been at the Mint price of £3 17s. 10½d. The Hamburg exchange touched 38; that on Paris reached 26·10. In fact, so drastic had been the contraction of credit in England that sterling was at a premium of 4 or 5 per cent. Commodity prices also continued to fall, and the index in the third quarter of 1816 was 130, or 38½ per cent. below that at the beginning of 1814. Gold was flowing into the country and accumulating in the vaults of the Bank. The Bank actually undertook, in September, 1817, to pay cash for notes issued before 1st January, 1817, and the complete resumption of cash payments seemed to be in sight.

But a set-back followed. In July, 1817, gold rose to £4, and at the end of the year it was at £4 0s. 6d. Mr. A. W. Acworth has pointed out the explanation.[1] The egregious Sinking Fund law required a sum of no less than £28,000,000 to be applied to the reduction of the Funded Debt. The money could not be provided from revenue, and, in fact, £8,000,000 of it was supplied by direct advances from the Bank of England. That was pure inflation. The price index rose from 130 in the third quarter of 1816 to 153 in the first quarter of 1818. The following year, 1818, was a year of crisis on the Continent. Since 1816 credit expansion had been rapid, and the prices of commodities had risen substantially. A credit expansion is brought to an end sooner or later by a shortage of gold, or, under a bimetallic system, of gold and silver. On this occasion the shortage was caused prematurely. Not only England but Austria-Hungary, Russia, and other countries, having made excessive issues of paper during the war, were trying to return to a specie basis. England was accumulating gold; Austria-Hungary and Russia, silver. England absorbed gold as the natural sequel of a crisis and a violent contraction of credit; the others issued foreign loans and drew the proceeds in silver. None of the three succeeded in regaining a metallic standard in 1818 (though England and Austria-Hungary accomplished this soon afterwards), and this was partly because their own competition forced up the value of the precious metals in terms of commodities, and therefore also in terms of their paper currencies. An Act was passed in May, 1818, prolonging the Restriction to the 5th July, 1819.

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[1] See *Financial Reconstruction in England*, 1815-22, pp. 76-9.

With the fall in the prices of commodities there came a financial crisis, which began in France, the bimetallic meeting-ground of the demands for gold and silver. In October, 1818, the Bank of France took measures to contract its discounts, refusing to discount any paper having more than forty-five days to run, as compared with the normal ninety days. Early in 1819 the price of gold rose to £4 3s. and that of silver to 5s. 7d., a premium of 6½ per cent. on the former and 10 per cent. on the latter. The exchange on Hamburg fell to 33·7, and that on Paris to 23·50. The resumption of cash payments seemed as far off as ever. Committees of both Houses of Parliament were appointed to consider what should be done. As the outcome of their investigations an Act was passed providing for resumption by gradual stages. The Bank was not to pay out coin, but to give bullion in large amounts (not less than 60 ozs.) in exchange for its notes, first from 1st February, 1820, at £4 1s. an oz., then from 1st October, 1820, at £3 19s. 6d., and finally after May, 1821, at £3 17s. 10½d., the coinage price. But so far as this provision was concerned the Act was a dead letter. Before 1st February, 1820, arrived, gold had fallen naturally and easily to the coinage price. The pressure due to the crisis on the Continent was quickly over. The crisis itself was by no means as severe as that of 1811 which preceded it, or as that of 1825 which followed it, and England, after the drastic liquidation of 1814-16, found it easy to fall into step again with the European money market when the effects of the crisis had passed off.

This troubled period illustrates well the variety of causes that affect the depreciation of a paper currency. Fundamentally the depreciation was due to financial strain. The unfunded debt reached £22,000,000 before the Peace of Amiens and fell to £14,000,000 in 1802. In January, 1804, it was £24,500,000, and rose steadily to £31,700,000 in January, 1807, and £38,700,000 in January, 1808. In January, 1813, it was £45,500,000, and in January, 1814, £57,700,000. The Peninsular campaigns and the great Continental coalition of 1813 and 1814 made these years the most expensive of the war. But though the exigencies of war finance compelled an over-issue, the extent of the depreciation varied widely from time to time according to world currency conditions. The original suspension in 1797 was mainly, and the unforeseen set-back in 1818 was partly, due to the abnormal absorption of the precious metals on the Continent. The beginning of depreciation in 1800 and the acute depreciation in 1811 were due to the financial crises of 1799 and 1811 abroad. The favourable exchanges in 1797-99 and in 1816-17 were due to crises at home, synchronising, one with a condition of inflated credit and the other with a period of recovery abroad. The depreciation in 1808-10 was due to a commercial credit expansion in England outstripping the expansion elsewhere. The depreciation in 1813-14 was due to a commercial recovery occurring in England while the recovery in Europe was still delayed by war. The Continental blockade, being especially an obstruction to British exports, made the exchanges more adverse in 1810-12 than they would otherwise have been.

In the great controversy which was started by the Report of the Select Committee on the high price of bullion in 1810 insufficient account was taken of this variety of causes. The Committee accepted the quantity theory of money, and appreciated also the fact that the monetary requirements of the community might vary, so that an increase in the circulating medium might synchronise with a fall in prices and an appreciation of the currency, or *vice versa*. But neither they nor their antagonists ever grasped the very complex theory of the variations in monetary requirements. Especially did they fail to understand how rapid and how great are the changes in the value of gold and silver themselves, caused by credit movements in the countries which use metallic currencies. Even index numbers of prices do not adequately measure the changes in the value of the precious metals, since a contraction of credit diminishes the volume of transactions as well as the level of prices.

The members of the Committee and their supporters, able and enlightened as they were, did not penetrate to the bottom of the question. But for all that the report represented an important step forward in currency theory, and they had much the best of the argument. Yet in the House of Commons they found the Government against them, and not only were the resolutions moved by Francis Horner in May, 1811, embodying the Committee's conclusions, rejected, but a set of resolutions, denying all their doctrine and asserting *inter alia* that bank notes were held in public estimation equivalent to the legal coin of the realm, was moved and carried by Vansittart, then an unofficial supporter of the Government (shortly to become Chancellor of the Exchequer). Mortified at this defeat of pure reason, the economists mercilessly pilloried the unfortunate Vansittart, and ridiculed his preposterous resolutions.

But perhaps the Government were not quite so foolish as they seemed. The Bullion Report itself was rather a diagnosis of the disease from which the currency was suffering than a prescription for treatment. It was easy to say that the note issue must be contracted and a return made to cash payments. But what if the money for the war could not be raised? The Bank of England was the only possible underwriter of Government loans, the only certain purchaser of Exchequer bills. If the Bank's power of creating credits were subjected to a limit, the last resort of the Treasury might fail. And like nearly all Governments that have to rely on inflationary finance, the Ministers of 1811 were anxious to keep up the pretence that the metallic standard was still in force. An official admission that the standard had lapsed might have militated against Government borrowings.

It may be guessed that these were the real motives of the Government, though they could not be openly avowed. Much was made of the disastrous effects of too great a contraction of credit, and of the inevitable drain of coin for subsidies to allies and foreign expenditure. The Prime Minister, Perceval, frankly admitted that the diminution of paper in circulation would make a favourable alteration in the exchange, but then, he said, it would be necessary to discontinue the exertions we were making abroad and to abandon our allies. What response could the House of Commons make to a Prime Minister making such an appeal at the greatest crisis of the war? Napoleon had stamped out the embers of resistance all over Europe, except in the little corner which Wellington was defending behind the lines of Torres Vedras, and the few remaining centres of rebellion in Spain. Perhaps it was this, rather than Vansittart's perverse ingenuity and laboured statistics, that guided the minds of the many members who gave silent votes against Horner's resolutions.

When the war was over, the party of pure reason came into their own. The doctrines of the Bullion Report seemed to have gained universal acceptance. No one was found to argue as in 1811 that, as guineas could not legally be melted or exported, the price of bullion, which was sought only for export, was no test of the depreciation of the bank note. In response to an appeal from the Government party, the opponents of Peel's resolutions embodying the recommendations of the House of Lords Committee did not even challenge a division.

Traces are to be found in the debate of 1819 of the views which had led Ministers to suppress the movement towards a resumption of cash payments in the midst of the war eight years before. Castlereagh, who was in office at both periods, defended the conduct of the Bank Directors against the accusation of interested motives. He declared that they had never permitted such motives to hinder them from affording that prompt and vigorous relief, which had it not come from them he was himself utterly ignorant whence it could have proceeded. And it is significant, too, that the contribution of the Bank Directors themselves to the proposals embodied in the Committee's recommendations was a request that the Government should repay £10,000,000 of its indebtedness to the Bank. The Directors unfortunately did not share in the general change of attitude towards the teachings of the Bullion Committee, but here, at any rate, they showed an appreciation of the primary cause of inflation.

CHAPTER XIX.

THE GOLD STANDARD.

The nineteenth century saw what was perhaps the most remarkable and far-reaching of all changes of standard, the almost universal adoption of the gold standard. The change came very gradually. It may be said to have begun with the English Coinage Act of 1816. This Act gave legislative recognition to a state of affairs which had already been long in existence. From 1717 to 1785 practically no silver was coined, because silver was under-valued in our coinage in comparison with gold.

When the guinea was fixed at 21s. the ratio of the value of gold to silver worked out at 15·21 to 1. The market ratio approximated to that of 14·5 to 1, which prevailed in France, for the population and wealth of France were much greater *relatively* to the rest of Europe in the eighteenth century than later on. Consequently, while the French coinage was genuinely bimetallic, with silver on the whole predominating, the British, like those of Spain and Portugal, which had an even higher ratio, was almost exclusively gold.

After the Seven Years War, the stability of this system began to be threatened owing to the worn condition of the gold coinage. In 1695 the monetary unit had become depreciated, owing to the silver coins being below weight ; now the abrasion of the gold coins produced the same effect. It seems likely that in the second case as in the first, the real cause was an improvement of credit facilities, which made the currency relatively redundant and drove the best coins abroad. For it is from 1750 that the great and rapid growth of the country banks dates. By 1774 the evil had grown serious enough to demand a remedy. At the instance of Lord Liverpool, then Master of the Mint, the entire gold coinage was recoined at the public expense, and provision was made in an Act of 1774 for the regular recoinage of light gold coins for the future. The silver coins, though even more worn than the gold, for they dated for the most part from the years 1696-99, were left untouched. Silver, however, was disestablished from the position of nominal equality with gold as unlimited legal tender. It remained unlimited legal tender by *weight*, but by *tale* it was made legal tender for £25 only. As there was no silver in circulation that was not far below the legal weight, payment by weight was a dead letter. This Act of 1774, however, was passed for a limited period only, and though twice renewed, was allowed to lapse in 1783.

In 1785 there occurred a new development which was not appreciated at the time. Under the ministry of Calonne a change was made in the French coinage. The mark of gold was to be coined into 32 *louis d'or* instead of 30. This raised the ratio from 14½ to 15½, and it ceased to be profitable to bring silver to be coined. It may be asked why gold was not immediately attracted to the French Mint from all quarters, till the existing silver coins were driven out of circulation. The explanation is that there were coinage charges, amounting to about 2 per cent., and that so considerable a "remedy" of fineness was allowed (and regularly taken advantage of)[1] that the coins which ought to have been $\frac{11}{12}$ fine were usually only $\frac{9}{10}$ fine. The bullion dealer who sold a mark of fine gold for its Mint price in gold coin and exchanged the gold for silver coin, did not get 15½ marks of fine silver, but hardly 15. There was, therefore, no immediate effect on the market ratio.

But four years later came the Revolution, and with the Revolution came the assignats. By 1794 most of the French stock of gold and silver had been driven abroad, and much of it no doubt was melted. The under-valued silver would be sure to go first, and would flood the silver market and raise the relative value of gold. The market ratio at Hamburg, which was 15 in 1793, rose to 15·37, the highest level for sixty years, in 1794, and 15·55, the highest till then known, in 1795. And this rise was permanent. In 1793-95 the price of silver in London fell below the coinage price of 62d. an oz. With the unfavourable movement of the exchanges in 1795-96, both gold and silver rose above the coinage prices, but after the crisis of 1797 silver fell again, and in January, 1798, was as low as 60d. There was a danger that silver might begin to displace gold as the standard of value, and an Act was hastily passed absolutely suspending the coinage of silver and re-enacting the limitation of legal tender which had been in force from 1774 to 1783.

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[1] See the results of actual assays quoted in Sir R. (now Lord) Chalmers' *Colonial Currency*, Appendix A.

This Act of 1798 was intended to be temporary, and a Commission of Inquiry was set up, with Lord Liverpool as one of its members, to advise as to the future system of coinage. But as the Bank Restriction Act was prolonged, and the country settled down to a paper currency, it seemed superfluous to discuss the coinage, and the inquiry was suspended. Lord Liverpool took the opportunity to record his own recommendations in his famous letter to the King, which is recognised as one of the greatest authorities upon the British coinage. In this letter, written in 1805, almost on his death-bed, he pointed out that the gold standard had practically been already established, and, elaborating a suggestion made by Adam Smith,[1] he advocated the legal recognition of this condition of things by making silver legal tender only for small amounts and by making a substantial coinage charge for silver. The coinage charge would discourage people from bringing silver to the Mint to be coined, and would make the use of silver as the standard of value impossible.

Years afterwards, Lord Liverpool being then dead, and his son Prime Minister, the Commission of Inquiry was called together again, in view of the approaching resumption of cash payments by the Bank, and issued a report recommending a gold standard on these principles, that is to say, the free coinage of gold, which was to be the sole unlimited legal tender, and the coinage of silver, subject to a charge, to provide a subsidiary currency of limited legal tender. The silver was to be bought at the old Mint price of 62s. a pound Troy (equal to 62d. an ounce), and the coinage charge was to be 4s., so that the pound would be coined into 66s., of which 4s. would be retained by the Mint. The Act of 1816 embodied these recommendations. It provided for the free coinage of gold at the then existing Mint price, which was £3 17s. 10½d. an ounce.[1] It removed the prohibition on the coinage of silver, which had been in force since 1798, and authorised the Master of the Mint to coin any silver brought to the Mint at the new rate of 66s. a pound. It also enacted that, *from a day to be fixed by a Royal Proclamation*, " it shall and may be lawful for any person " to bring silver to be coined, and " there shall be delivered to the person bringing in and delivering the same a sum in silver coins . . . after the rate of 62s. . . . for every pound Troy of the standard fineness and weight."

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[1] *Wealth of Nations*, Book I., chap. v. The suggestion of a subsidiary coinage of limited legal tender was not altogether new. Not only had it already been applied, as Adam Smith pointed out, to the copper coinage, but it was applied experimentally to silver halfpennies and farthings in the reign of Henry VI. By an Act of 1446 for a period of two years the pound of standard silver was to be coined into 33s. worth of these coins, as compared with 30s. worth of groats or pennies, and the smaller coins were to be legal tender only for 1s. in every 20s. (Ruding, *Annals of the Coinage*, vol. ii., pp. 335-7.)

Now this provision *compelled* the Mint to buy silver at 62s. a pound, and to pay for it in silver coin. At that time the market was governed by the ratio of 15½, which had been established in France by Calonne, and had survived the Revolution, the Empire and the Restoration. Silver was worth at that ratio 60s. 10d. a pound, and if a higher price was to be offered in England all the silver in France might be drawn across the Channel. True, the silver would only have been paid for in coin of limited legal tender, but the price of 62s. a pound would none the less have been effective until the redundancy of silver had become so great as to drive the silver coin to a discount. In short, the scheme recommended by the Commission, and the Act of 1816 as based upon it, were unworkable. Lord Liverpool had foreseen these dangers, though he had by no means appreciated their importance, and he had, as an afterthought, suggested the remedy. The mere levy of a coinage charge was not sufficient in all circumstances to limit the coinage of silver; the coinage of silver must be placed within the absolute discretion of the Crown, and no right could be left to private persons to have silver coined at any stated price. And luckily the Act of 1816 could be very readily adapted to apply this remedy. No proclamation was ever issued fixing the day after which people might insist on selling silver to the Mint at 62s. a pound.[1] Their right to do so, therefore, remained in abeyance till the Act was repealed and replaced by the Coinage Act, 1870, which has nothing to say regarding the price at which silver is to be purchased.

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[1] As 44½ guineas were coined from a pound and a guinea was worth 21s., the pound was worth £46 14s. 6d. and the ounce £3 17s. 10½d.

The system might equally well have been threatened with failure if the market price of silver had risen above 66s. a pound (66d. an ounce), for in that case it would have paid to melt or export the silver coin. But the French bimetallic system was a safeguard against this happening without ample warning. For so long as France had silver to export, and was bound to buy gold at the ratio of 15½, the world price of silver could not rise to 66d. an ounce, which corresponds to a ratio of 14¼.[2]

It is striking proof of the degraded condition of the old silver coin that the considerable quantity (about £2,500,000) remaining in circulation in 1816 had survived the Bank restriction without being exported, in spite of the premium which was at one time nearly 40 per cent. above the coinage price of 62d.

Since 1717 the British gold coin had been the guinea of 21s., which differed inconveniently from the pound sterling, the unit of account. The opportunity of the Coinage Act of 1816 was taken to revert to the 20s. gold piece (the value originally intended for the guinea) and the old name of

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[1] At the end of June, 1816, when the Act received the Royal Assent, the price of silver was actually 5s. 0½d. per oz., or 60s. 6d. a pound. Here was practical evidence that the proposed Mint price of 62s. was too high.

[2] With regard to the rise in the price of silver in 1920, and the recoinage which has been undertaken in consequence of it, see below, pp. 417-18.

"sovereign," which had belonged to the Tudor coins of that value,[1] was revived.

Thus was completed the establishment of the gold standard in England, and thus perished the Mint price of silver fixed in the last years of Queen Elizabeth, and fought for so strenuously by Locke.

But even then the gold standard did not immediately come into practical as well as legal operation. The Bank restriction was still in force, and though the premium on gold had for the moment almost vanished, the steps taken towards the resumption of cash payments suffered a set-back in 1818. The premium on gold reappeared. There followed the Parliamentary Committees of 1819 and Peel's Bill providing for gradual resumption. Though there was no division against the resolutions embodying the principles of the Bill, a small coterie of inflationists found a spokesman in Lord Folkestone, who, like Lowndes in 1695, wanted to reduce the standard. He argued that the re-establishment of the coinage price of £3 17s. 10½d. an ounce would cause unnecessary hardship, and he urged that a new coinage price of about £4 0s. 6d., corresponding to the then market price of gold, should be adopted. Peel, following in the footsteps of Locke, roundly declared that a departure from the long-established legal standard "was a proposition which could be viewed in no other light than as a fraud on the public creditor." Indeed, it would have been a mean-spirited course to go back on the century-old standard on account of so trifling a premium on gold, a premium which, as it turned out, the action of the market wiped out in a few months, before any of the provisions of the Act of 1819 had come into operation.

The next country to adopt a gold standard was the United States. As in the case of England, the United States passed from silver to gold in the first place not by a definite act of policy but by an accidental over-valuation of gold. As in the case of England, too, the currency history of the United States was varied during the transitional period with excursions into the realm of paper currency. The Americans were almost the first people to use paper money. Some of the Colonies had indulged in it before John Law embodied a forced currency in his "system," and by 1763, at the end of the long conflict between England and France for supremacy in the North American Continent, so great had been the abuse of legal tender notes that the Imperial Parliament, by an act of paternal legislation in the spirit of the old Colonial system, forbade further issues. At that time the unit of value in America was practically silver, in the form especially of the Spanish dollar. Far the greater part of the world's supply of silver came from the mines of Spanish America. It was coined on the spot at a number of local mints, for it is convenient to transform the precious metals into coin of known weight and fineness at the earliest stage after extraction, in order that even when bought as commodities the quantity and value can be readily and certainly estimated.

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[1] The sovereign of 20s. was first coined by Henry VII. in 1489, of the old standard (only $\frac{1}{192}$ alloy). The sovereigns of Henry VIII. and Queen Elizabeth were of Crown gold $\frac{11}{12}$ fine, like the modern sovereign.

The supply of the precious metals naturally came to North America direct from the producing countries, Mexico or Peru, and as gold was over-valued in Spain and Portugal as compared with silver (the ratio in both countries being 16 to 1), it was silver rather than gold that came, and the silver Spanish dollar held the field as the standard of value and the medium of exchange in 1775, when the War of Independence broke out. The rebel Colonies were ill-equipped to stand the strain of war finance. There was no adequate machinery of taxation, and so desperate a cause did not command the confidence of lenders, at any rate before Saratoga. Individually and collectively the Colonies resorted to the expedient of paper money, with which they were already familiar. In their collective capacity they were represented by an Assembly of delegates called the Continental Congress, and the paper issues authorised by this body, to the preposterous total of $200,000,000, rival the ill-starred fame of the French assignats under the name of Continental Currency. Depreciation began in 1777.

By 1780 the paper dollar had sunk to $\frac{1}{40}$ of its value in silver. In that year the system was brought to an end. The success of the Americans had brought the help of France, Spain, and Holland, both military and financial. Congress took advantage of the consequent improvement of its credit to make an issue of 5 per cent. five-year notes or bonds to be subscribed for in the depreciated paper money, which was taken at not more than $\frac{1}{20}$ of its value, and when received was destroyed. A large portion of the paper money still remained unredeemed, but from 1781 it ceased to be used as a medium of payment at all. Having become almost valueless, much of it was not even thought worth preserving, and when in 1790 the remainder outstanding was accepted in subscription for stock at $\frac{1}{100}$ of the nominal value, only $6,000,000 out of $78,000,000 estimated to be in existence came to light. Presumably the balance of $72,000,000 had been destroyed as worthless.[1] From time to time Congress had issued internal loans, which had been subscribed in paper. To repay $1000 in silver to a man who had subscribed $1000 in paper, when that sum was the equivalent of only $25 in silver, would have been as extravagant as to repay $1000 in this depreciated paper to the lender of $1000 in silver would have been dishonest. Liability was acknowledged in respect of the successive loans according to a scale measuring the actual depreciation of the paper in the market at the date of each loan.

The several State legislatures applied the same system of a scale of depreciation to private debts and pecuniary contracts dating from the period of depreciation, thus providing a precedent for the French legislation after the collapse of the assignats.[2]

Thus the new community lived down its debauch of paper money and reverted to the dollar of Spanish America. When a national coinage came to be initiated, it was based on a new silver dollar very nearly equivalent to the old. Gold was also to be coined at a ratio of 15 to 1, but as the value of gold in Europe was rising just then, and France adhered to the ratio of 15½ to 1, this was an under-valuation, and gold did not circulate in America.

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[1] *Financial History of the United States*, D. R. Dewey, section 16.

[2] See Dr. E. L. Hargreaves, *Restoring Currency Standards*, pp. 8-25.

In 1834, the currency having been composed exclusively of silver ever since the introduction of the new coinage, it was decided to raise the ratio in order to attract gold. It was not apparently intended to drive out silver altogether, but in fact the ratio adopted, the Spanish ratio of 16 to 1, was as much too high as the old ratio had been too low. The result was that gold steadily took the place of silver, and silver was relegated to a subordinate position just as it had been in England in the eighteenth century. By 1853 the loss of silver had become inconvenient, and subsidiary silver coins of inferior fineness were coined on the model of the English system.

The period from 1848 to 1871 was one of strife and change in Europe and America. Revolutions and wars left behind their usual legacy of forced paper currencies. The year 1871 found Germany an Empire, France a Republic, Italy united, the United States saved from secession and slavery, Austria and Hungary reconciled in a Dual Monarchy. France, Italy, Austria-Hungary, Russia, and the United States had all been compelled by the stress of war to resort to issues of inconvertible paper. In France, the notes of the Bank of France, though inconvertible, were not materially depreciated. In all the other countries named, the paper money was at a discount. England had a gold standard, France and the members of the Latin Union had bimetallism based on the ratio of 15½ to 1 (though, of course, both metals had been driven out of Italy by the depreciated paper), and Germany, Holland, Scandinavia, and practically all Asia and most of South America had a silver standard.

In the period since the gold discoveries which were made in about 1850 in California and Australia, France and her bimetallic associates of the Latin Union had been steadily absorbing gold and exporting silver, and in 1865, as has already been mentioned,[1] it became necessary to institute a subsidiary silver coinage below the standard fineness. It seemed as if

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[1] See p. 203.

France would soon be as much a gold-using country as England and the United States, and the Government of the newly-constituted German Empire feared that the continuance of the silver standard would place their people at a disadvantage in commerce and international finance. It was, therefore, decided to adopt a monometallic gold standard in Germany. The payment of the French indemnity gave Germany for the moment the advantages of a creditor nation, and the opportunity was taken to buy large quantities of gold in the world's markets.

At first the change of standard did not appreciably affect the value of the German monetary unit. As between the new gold and the old silver coins the same ratio of 15½ had been adopted as prevailed in France, and till 1873 the ratio in the market did not differ materially from this. But in 1872 Norway, Sweden, and Denmark followed the German example and adopted a gold standard, embodied in the Scandinavian Convention (18th December, 1872). On the 21st May, 1873, Holland suspended the free coinage of silver. By that time the increased demand for gold had begun to affect its price in terms of silver. In 1873 the ratio approached 16, in 1874 it exceeded that figure. The bimetallic countries had hastily to limit and ultimately to suspend the free coinage of silver for fear of being rapidly denuded of their gold and left with a silver standard. There ensued an ever-increasing divergence of the ratio from the old figure of 15½. The various countries which had passed from a silver or bimetallic to a gold standard for the most part retained their old silver coins in circulation as unlimited legal tender, though, except for subsidiary coins, they issued no new silver. The five-franc and three-mark pieces became tokens, of which the intrinsic value was below, and soon far below, the nominal value. It will be seen that this very important change of standard was effected without any *discontinuity*. Moreover, unlike the mediæval debasements, it was a change from a lower to a higher unit of value. When the difference in value did make itself felt, there followed all the consequences of an appreciation of the standard, falling prices, depressed trade, low profits, unemployment.

But the questions of principle involved in a change of standard were hardly raised in the case of the countries which substituted gold for silver while on a metallic basis. To find these questions agitating the minds of Governments we must turn to the countries which in 1871 were using inconvertible paper, and which were faced with the problem of a resumption of specie payments.

The United States had issued inconvertible notes (called "Greenbacks") during the Civil War to an amount approaching the authorised maximum of $450,000,000. In the last year of the war this paper money had depreciated more than 50 per cent. The restoration of peace speedily raised its value, but even when peace was an accomplished fact the discount was still some 30 per cent. The first measure taken to correct this depreciation was a reduction of the quantity of paper in circulation. This had been reduced to $356,000,000 by February, 1868, when political opposition brought the policy of contraction to an end. Various devices were then resorted to with a view to making resumption possible, but none, except the gradual accumulation of a stock of gold, was really put into effective operation. And so long as the quantity of paper in circulation was not reduced, even the accumulation of gold would be of little use. To restore the paper currency to par, the gold would have to be applied to redeeming so much of it as was redundant; that is to say, to *reducing* the amount in circulation. The upshot was that practically no positive step was taken to facilitate resumption. The result seems at first sight rather surprising. In the first months of peace the gold value of 100 paper dollars was about 70. The averages for the years 1866, 1867, and 1868 were 71, 72·4, and 71·6. The contraction in three years from a circulation of $433,700,000 to one of $356,000,000 had apparently made no visible impression upon the depreciation. But in the following year, 1869, an improvement made itself felt, and by the end of the year the gold value had risen to 82·3, and the average for 1870 was 87, and for 1871, 89·5. There then succeeded another period of stagnation, and the average did not rise well above 90 till the end of 1876, from which time the paper money rose rapidly to par and specie payments were actually resumed on the 1st January, 1879.

What, then, is the explanation of these vagaries? Why did the greenback remain obstinately depreciated when the issue was contracted, and take two apparently capricious leaps forward (separated by another interval of reaction) when no measures were being taken to support it? The answer is to be found in the variations to which the value of gold was being itself subjected in consequence of credit movements in Europe. The greenback was making very satisfactory progress in 1866, having reached 76·6 in March and 78·6 in April, when in May the great crisis caused by the failure of Overend & Gurney broke out in London. The effect of the crisis was hardly felt in May, and the greenback was still at 75·9 in that month, but it fell to 67·2 in June and 66 in July. This illustrates the effect of an external crisis on the exchanges. The value of gold in London in terms of wealth was abruptly increased, and the value of paper in New York in terms of gold correspondingly decreased. There followed a period of depressed trade and falling prices in Europe, and the contraction of the paper currency in America did no more than keep the greenback approximately to a fixed proportion with gold. By 1869, and still more in 1870, the revival was beginning in Europe. It was stimulated rather than retarded by the Franco-German War, since the paper issues in France released large quantities of gold and silver for export. The years 1871-73 saw an unusually vigorous expansion of trade.

As nearly always happens, this trade expansion was marked by large movements of capital, and capital flowed especially towards the United States, which was then the greatest of "new" countries. In the four years 1869-72 the railways of the United States were increased by no less than 25,000 miles. Since the Civil War the foreign trade returns had shown an excess of imports over exports, which, in view of the heavy annual liability of the country for interest on capital previously obtained from the Old World, implied that a very large amount of fresh capital was being imported. This excess of imports amounted for the four years 1869-72 to $458,000,000 or $114,500,000 a year, while after this period an excess of exports was the almost invariable rule. Here we have an instance of the stream of investments from the old countries to the new increasing in volume with the revival of trade, and also of the consequent favourable tendency of the foreign exchanges in the new countries. The rise in the gold value of the paper dollar from 74 at the end of 1868 to 82·3 at the end of 1869 and 90·3 at the end of 1870, was due to the combined effect of the revival of credit, which reduced the value of gold in Europe, and of the flow of fresh capital into the United States. From the end of 1870 till the crisis of 1873 the value of the greenback rose but little. It touched 91·5 at the end of 1871, but fell a little in 1872, and was as low as 85 in May, 1873. The explanation is that the credit expansion in Europe was followed by a credit expansion in the United States, and the greenback fell in wealth-value as quickly as gold. Moreover, though the importation of capital tends to make the exchanges favourable, this tendency does not outlast the actual process of importation. The influx of European capital might be enough to bring the value of the greenback up to 90 in 1870; in order to keep it at 90, the influx must continue unabated; in order to raise it above 90, the influx must grow actually greater. In 1871 and 1872, if the importation of capital increased at all, the effect was offset by the growing inflation in the United States itself, and the value of the greenback began to decline.

In 1873 a new development occurred. In 1870 and 1871 the expansion of credit in Europe had been stimulated by the release of gold from France. In 1872 and 1873 it began to be checked by the absorption of gold into Germany. The German gold standard law was passed in 1871, and the coinage of gold began in 1872. The gold coined in 1872 amounted to 421½ million marks and in 1873 to 594 millions. The withdrawal of about £50,000,000 of gold from other countries necessarily started a contraction of credit. Even in November, 1872, the Bank rate in London rose for a time to 7 per cent. Early in 1873 Germany stopped buying gold (the heavy coinage in that year being largely from gold already bought). But trade and prices had already turned the corner. The first danger-point arose in Austria-Hungary. Austria-Hungary had emerged in 1867 from a disastrous period of twenty years, marked by a bitter civil war and two unsuccessful foreign wars. The Italian and Hungarian questions had been settled for at least a generation, and there was at last a prospect of tranquil economic development. Here was an enticing opportunity for German speculators, just at a time when German credit was being abnormally stimulated by the indemnity payments. From the point of view of railway construction Austria-Hungary was almost a "new" country. In 1870 the whole mileage was only 5875. In 1873 it had risen to 11,060, so that 5185 miles had been added in three years. Like the United States, Austria-Hungary normally exported more goods than she imported. Yet for the five years, 1870-74, there was an aggregate excess of imports of 619 million florins, or about £60,000,000. Speculation in Germany itself had been controlled, and the contraction of credit had less effect than might have been expected in Berlin, but there was an acute crisis in Vienna. The effect of an *external* crisis is seen in the fall of the greenback to 85 in April, 1873. Next the contraction of credit reacted on the United States themselves. The fall of values (Sauerbeck's index number measuring prices in England fell from 111 in 1873 to 102 in 1874), combined with the sudden subsidence of the stream of capital which had flowed from Europe to America, led to a violent crisis in September and October, 1873. There were numerous failures and a general suspension of payments *even in paper* by the banks. Legal tender notes for a time commanded a premium over certified cheques of from ¼ to 3 per cent. In the rise of the greenback from 86·7 in August to 91·8 in October we have an example of the effect of an *internal* crisis on the value of the monetary unit. To meet the urgent needs of the banks for legal tender money, the issue of greenbacks was increased by $26,000,000 to $382,000,000. Partly as a result of this measure, partly as a result of the progressive contraction of credit and fall of gold prices in Europe, the greenback, after remaining at 90 in 1874, fell away in 1875 (touching 85·4 in June). In 1876 and 1877, the issue of greenbacks was reduced again to about $350,000,000, and the natural economic expansion of a new country steadily raised the value of the notes. There was a good harvest in 1877 and a still better in 1878, and a very large export of wheat helped on the steady progress towards resumption. The greenback was at 89·2 on the 1st July, 1876, 93·46 on the 1st January, 1877, 94·5 on the 1st July, 1877, and 97·2 at the end of 1877. In the course of 1878 it reached par.

The history of the greenback supplies an interesting parallel in some respects to that of the Bank of England note in the period 1815-21. The extreme difficulty in restoring the value of a depreciated currency at one time, and the ease with which this can be done at another are explained by the changes in the value of gold. The periods of depression in 1815 and 1818-19, in 1866-68, and 1874-76 were very unfavourable, the periods of expansion in 1816-18, 1819-20, 1869-73 were very favourable, to a paper currency. It must be admitted that the rise of the greenback in the years 1877-79, when Europe was still in a state of depression, calls for some further explanation. But the causes mentioned above, the contraction of the currency, the natural growth of business in a new country and the exceptionally productive harvests probably supply a sufficient explanation. The two periods, 1869-72 and 1876-79, were both favourable to the appreciation of the greenback, notwithstanding that the first was marked by an exceptional excess of imports and the second by an exceptional excess of exports. From 1869 to 1872 the imports averaged 532 and the exports 417 millions of dollars; from 1876 to 1879 the imports averaged 463 and the exports 678 millions. No more striking example could be desired of the danger of leaping to a conclusion from the bare fact of a "favourable" or "unfavourable" balance of trade. If the unfavourable balance is due to an influx of foreign capital, it has as "favourable" an effect on the foreign exchanges as the favourable balance due to an exceptionally large volume of production.

In one important respect the position of the United States after the Civil War differed from that of England after the

Napoleonic wars. The British debt was a sterling debt ; the liabilities were payable in whatever medium might be legally recognised for the payment of debts in England, whether gold or paper. The United States debt was a *gold* debt, and though this view did not pass unchallenged it was soon adopted beyond dispute. Consequently, no change in the monetary standard would of itself have affected the good faith of the nation as a debtor.

The return to specie payments in 1879 did not finally settle the standard. During the prolonged régime of inconvertible paper the Americans had made the very dangerous discovery that an expanding currency makes for active trade, high profits, and good employment. It was largely due to the prevalence of inflationist views that the Government note issue was not contracted, and that the resumption of cash payments was not consummated till the natural growth of business had absorbed the redundant paper. And even before this had actually occurred, a new question had been raised by the inflationist party. The rapid displacement of silver by gold in Germany in 1872 and 1873 had led all European countries where silver was in circulation as the metallic standard, either in conjunction with gold or alone, to defend themselves against the flood of redundant silver by suspending the free coinage of silver. This general demonetisation of silver had completely upset the time-honoured ratio of 15½. The ratio was rising rapidly, and in 1878 had reached 18. The American inflationists discovered that the United States had almost by accident participated in the general movement. In 1873 an inconspicuous Coinage Act had quietly dropped the silver dollar out of the list of standard coins. In fact, the transition from a nominally bimetallic but practically a gold standard to a legal gold standard had been effected in the United States, just as it had in England in 1816, at a time when the general use of paper money made coinage legislation for the moment of academic interest only.

In the United States the inflationists, who favoured a lowering of the standard of value on its merits, were soon in alliance with the silver interests. For the production of silver is itself an important American industry. The silver dollar was restored to its position of unlimited legal tender, but instead of the free coinage of silver at the ratio of 16 to 1, a limited monthly coinage of silver was provided for. Every month a sum of not more than $4,000,000 and not less than $2,000,000 was to be spent on the purchase of silver for coinage into dollars. At the then price of silver $2,000,000 worth would be coined into about 2,400,000 standard dollars, and the minimum amount of coinage provided for was thus about $29,000,000 a year. This was a very considerable annual addition to the circulation. The whole currency of the country consisted of $350,000,000 of greenbacks and $300,000,000 of National Bank notes, together with a moderate amount of gold which had remained in circulation (in defiance of Gresham's law) in the extreme West. An annual addition of $29,000,000 to this total might easily threaten the gold standard. As it turned out, however, the silver coinage was for some years absorbed without difficulty. The year 1879 saw the turning-point in trade. There was a sharp rise of prices in the latter part of that year, which continued in 1880. Credit expanded, and the United States, now on a gold basis, participated in the world movement. The importation of foreign capital revived, and notwithstanding the continuance of good harvests, the excess of exports began to diminish, (though even at the height of the movement in 1882 there was not an actual excess of imports such as marked the period before 1873). The tendency which in 1870 had expended itself in raising the value of the paper currency, now required a great addition to the metallic currency. The statutory silver coinage was quite insufficient, and large importations of gold became necessary, amounting in the two years 1879-80 and 1880-81 to $175,000,000, although, of course, the United States was one of the great gold-producing countries of the world.

In 1882, with the French crisis in January, came the reaction in Europe, and the stream of gold stopped. The next few years were a period of severe depression. Credit contracted, prices fell, and unemployment was rife. The United States currency was saved, however, from the great strain which this state of affairs might have been expected to place upon it by the steady contraction of the National Bank note circulation. The note issue of the National Banks had to be secured by United States bonds. The bonds were being steadily redeemed out of surplus revenue, and, as this process went on and the price of bonds rose, the profits of issue diminished and the note issue was steadily contracted. In July, 1883, it amounted to $356,000,000 (having altered but little for several years). In the seven years till 1890 it diminished to $186,000,000. The total decrease of $170,000,000 was spread very evenly over the whole period. In the same period of seven years the coinage of silver dollars amounted to $222,000,000, so that the net addition to the currency under these two heads was the very moderate amount of $52,000,000, and even this was set off by an accumulation of a gold reserve, out of surplus revenue in the Treasury. In fact, during the years of depression, 1882-86, the uncovered silver and paper money actually diminished, and the currency requirements of a growing community (notwithstanding the depression) necessitated the retention in the country of nearly all the output of gold from the mines, the net exports being trifling.

The beginning of a revival of trade came in about 1887. On this occasion it was the New World which led the way. As in the years 1869-72 and 1879-82, there was again a great spurt of railway construction in the United States, but this began in 1886 before trade in Europe had begun to revive. Imports into the United States practically equalled exports in 1887 and exceeded them by $33,000,000 in 1888, while the excess of exports was small in 1889 and 1890. But the great imports of gold which marked the years 1879-82 were not repeated. Though the imports in the two years 1886-87 and 1887-88 amounted to $59,000,000, nearly all of this was exported in the two following years. This loss of gold was a sure sign that the expansion of credit in the United States was outstripping the expansion in the gold-using world generally. As the United States was importing capital on a large scale, we may infer that the excess expansion was very considerable.

The first check in the world expansion arose at the other end of the New World. A perfect orgy of speculative investments had been taking place in the Argentine Republic. Here likewise the balance of foreign trade may be taken as a test. For some years up to 1880 there had been a moderate excess of exports over imports. In the five years 1881-85 imports averaged $77,000,000 and exports $71,000,000. In the five years 1886-90 the average imports had grown to $130,000,000 and exports to $96,000,000. The annual excess of imports, amounting to no less than $34,000,000, is clear evidence of the large importations of capital, especially when account is taken of the already heavy liabilities of the country for interest on existing foreign capital and for shipping freights, etc. In 1890 the whole structure of Argentine finance collapsed in a welter of corruption and civil disorder. The catastrophe involved the great British house of Baring Brothers, which had undertaken important Argentine issues. In November, 1890, it was learnt that Barings was about to suspend payment. If all the bills drawn upon Barings became waste paper, it was feared that the financial system of the City of London would be involved in irretrievable ruin. The principal London banks agreed with the Bank of England to guarantee the payment of Baring Brothers' liabilities, and as no one bank assumed a greater burden on account of the guarantee than it could certainly bear,[1] all danger of panic was averted. But the magic of the trade expansion was gone. Notwithstanding that the gold reserve of the Bank of England was never subjected to any real strain (the precautionary importation of £3,000,000 from the Bank of France proved to be quite superfluous), it was clear that there was no room for further expansion, and thenceforward a tight hand was kept upon credit.

But the check to credit did not extend to the United States. The year 1890 saw two measures which tended to prolong the expansion in that country even after it had ceased elsewhere. The tariff was increased and made more protective, and the monthly purchases of silver were increased from $2,000,000 worth (or about 2,300,000 ozs. at the then price of silver) to 4,500,000 ozs., against which there were to be issued a new series of treasury notes. An increased protective tariff makes the exchanges favourable. It checks imports, and leaves a balance of exports to be paid for. Where there is a gold standard, gold will be imported till the level of prices has been raised to such a point that sufficient additional imports have been attracted or goods have been diverted from export to redress the disparity.

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[1] In the end the assets more than covered the liabilities and the guarantors lost nothing.

And on the top of the tariff came, in 1891, far the greatest wheat harvest that the United States had ever known, 612 millions of bushels being produced as compared with the previous highest of 513 millions in 1884 and 504 millions in 1882. This coincided with a year of scarcity and high wheat prices in Europe, and in the year to 30th June, 1892, grain to the value of $299,000,000 was exported as compared with an average of $140,000,000 in the five preceding years.

But for all that, the coincidence of a credit expansion in the United States, artificially sustained by the increased purchases of silver, with a contraction in Europe, caused a growing efflux of gold. The export in the year 1890-91 was $68,000,000. In 1891-92, as a result, perhaps, of the harvest and the tariff, the export stopped, but in the following year, 1892-93, it was no less than $87,000,000. Such a state of things could not continue long. The addition to the supply of gold in Europe helped to delay the credit contraction, and the prices of commodities showed no decline in 1891, for though materials had begun to fall, most articles of food rose. But in 1892 came a fall of 5 per cent. (as measured by English prices). If the United States held aloof and refused to contract credit, the export of gold was bound to grow greater with the progressive divergence between American and European prices.

Matters came to a head in June, 1893, when there burst out one of the severest financial crises in the history even of American credit. Even in March there had been a premonitory stringency, and the interest on call money had momentarily risen to 50 per cent. On the 29th June it rose to 73 per cent., on the 1st July to 140 per cent.[1] As has happened in other crises in the United States, the National Banks, bound by statute to maintain reserves equal to a certain proportion of their deposits, refused to pay out legal tender money. They thought it safer to break their engagements with their depositors than to transgress this legal requirement, or, where a breach of it could not be avoided, to increase the amount of the deficiency. There was a general suspension of cash payments throughout the country, except at Chicago alone. The clearing system between banks continued, and in the sudden dearth of legal tender money some Eastern factories paid their hands in cheques. The evil to be cured was twofold. Credit had to be contracted to the European level; the steady inflation of the legal tender currency by the issue of treasury notes against the purchases of silver had to be stopped. The contraction of credit was effected by the crisis itself. There were multitudes of bank failures, and a violent contraction of industry and of all branches of business. The export of gold was for the moment reversed, and in the second half of 1893 over $50,000,000 was imported. The Act requiring the purchase of silver was hastily repealed.

But, nevertheless, the gold standard was not even then beyond danger. It was threatened both politically and economically. The silver party was still active, more active indeed than ever. The price of silver had been raised in 1890 (partly by the increased purchases of silver and partly by the general rise of gold prices) from 42d. an ounce to more than 50d. In 1892 it had fallen below 40d. The crisis of 1893 and the repeal of the Silver Act brought it down to 34d. In 1894 it fell to 28d. At the same time there was an intense depression of trade in both Europe and America. Just when the silver-producing interests were being subjected to such heavy losses, the inflationists could point to the dire results of a contracted currency.

At the same time, the greatest difficulty was experienced in maintaining the gold standard at all. The silver purchases had ceased, but the fall of gold prices in Europe continued till 1896, and in spite of the effects of the crisis the contraction of credit in the United States was soon found to be insufficient to keep pace with it. The export of gold recommenced, and for the two years 1894 and 1895 amounted to no less than $150,000,000. No central control of credit existed, and the only way in which a more rapid contraction of credit could be enforced was by restricting the supply of legal tender money. The Government proceeded to raise gold by borrowing, but the gold was let out as quickly as it was borrowed, and the circulation of paper money was not reduced. In 1896 there was a Presidential Election. The Democratic candidate, Mr. Bryan, stood for the unqualified free coinage of silver. The price of silver being then 30d., the value of a silver dollar was a little over 50 cents. Had Mr. Bryan won the election and restored the free coinage of silver, the change in the standard of value would have been prodigious, even if every allowance be made for the consequent changes in the values of gold and silver. He and his party were decisively defeated, and the gold standard was secured. Trade was already reviving. The vast supplies of gold acquired by the great European banks of issue since 1893 were at last beginning to take effect in a new expansion of credit and a new activity of business. In 1896 the export of gold stopped, and notwithstanding a large increase in the output of the American mines, the imports of the three years, 1896-97 to 1898-99, amounted to no less than $200,000,000. In 1900 an Act was passed definitely establishing the gold standard.

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[1] Interest at 50, 73, or 140 per cent. means a commission of $\frac{1}{8}$, $\frac{3}{16}$, or $\frac{3}{8}$ per cent. per diem, *plus* interest at 5 per cent. per annum.

It is as true of the history of the silver question as of the history of the greenbacks that it cannot be fully understood without taking into account the variations in the international value of gold. The Silver Act of 1878 came at the beginning of a period of trade activity, which enabled the country to absorb the monthly quota of silver without difficulty, and required large imports of gold to supplement it. During the depression which followed, the fortuitous contraction of the National Bank note circulation made room for the silver. It was only when the ensuing spell of good trade culminated in the belated crisis of 1893 that the strain of the redundant silver began really to be felt. Just when the loss of gold was beginning to be serious, trade turned the corner. In 1896 world prices began to rise, or, in other words, gold became cheaper, and the gold standard was saved just at the moment when the political opposition to it was decisively defeated.

The Act of 1900 imposed on the Secretary of the Treasury the duty of maintaining all forms of currency at par with gold, but not necessarily by providing for their convertibility into gold. There remained in existence a motley collection of currencies, some only of which were legally convertible into gold. Alongside gold coin (which was never popular) circulated gold certificates which were regarded not as paper money but as a metallic currency. The greenbacks had been convertible into gold since 1879. Silver dollars, however, were unlimited legal tender, and not convertible into gold, and silver certificates were convertible into nothing but silver dollars. National Bank notes were convertible into money, but that did not necessarily mean gold. Legal tender money comprised gold coin, silver dollars, and greenbacks.

The issues of greenbacks and of silver dollars were fixed in amount. National Bank notes could be increased if the supply of bonds eligible for security was increased (as it was by the issue of Panama Canal bonds). Otherwise the volume of currency could only be increased or diminished by changes in the gold certificates and gold coin.

The Federal Reserve Act of 1913 introduced two new forms of currency. One, the Federal Reserve Bank note, was intended to displace the National Bank note, but has now been allowed to lapse into disuse. The other, the Federal Reserve note, has become the principal currency of the country. It is not legal tender, but is convertible into lawful money at the issuing bank, or into *gold* at the Treasury. The issue of Federal Reserve notes is backed by a minimum gold reserve of 40 per cent., to be let below the limit on certain conditions, with the consent of the Federal Reserve Board.

The Federal Reserve notes have been added to all the other forms of currency, and these have been left as they were (except that gold certificates have become legal tender). The amount of gold required to back a given monetary circulation depends upon the fortuitous division of the circulation between gold certificates and Federal Reserve notes. No one cares which medium predominates in the money he handles. By substituting a milliard of gold certificates for Federal Reserve notes in the years 1923-25, the Federal Reserve Banks increased the country's statutory requirements of gold holdings by $600,000,000. By issuing a milliard of Federal Reserve notes and presenting the gold certificates displaced from circulation at the Treasury, they could release the $600,000,000 of gold again, and no one would notice the difference.

This absurdity has dropped into the background because the huge accumulation of gold since 1921 has made the reserve proportions in any case inoperative.

CHAPTER XX.

THE GOLD STANDARD (*continued*).

ENGLAND after the Bank restriction, and the United States after the Civil War, both returned to a gold standard which had been substantially in operation before the issue of irredeemable paper had begun. In both countries there was in a sense a change of standard, because both gave legislative recognition to the gold standard during the paper régime. Those countries of Europe which were in 1872 and 1873 in the enjoyment of a metallic currency, whether bimetallic or silver, and which followed the lead of Germany in suspending the free coinage of silver and passing to a gold standard, preserved the continuity though not the identity of their unit of value.

But there were some countries which, either because they were using irredeemable paper at the critical period or for other reasons, delayed making the transition from a silver to a gold standard until the old stability of the ratio between the two metals had vanished. These were faced with the problem of selecting a new metallic standard. Many examples might be cited, but, as it is no part of my purpose to write a universal history of currency, I will confine myself to describing three only of the most important, namely, Austria-Hungary, Russia, and India.

Austria-Hungary nominally had a silver standard, but in fact had been battling against currency difficulties since 1848. Her experience of inconvertible paper dated back to the Napoleonic wars. The war of 1809 especially exposed her to a greater financial strain than she could bear, and in 1811 an attempt was made to restore order by making a new issue of paper to redeem the old at no more than one-fifth of its face-value. Provision was made for the settlement of debts contracted during the depreciation on a sliding scale according to the metallic value of the paper florin at the time each debt was contracted (as was done with the Continental Currency of the United States in 1780 and with the assignats in 1796).[1] But in 1813 the country was again drawn into the war, and new issues became necessary. Heavy depreciation followed. In 1815, during the Hundred Days, 100 florins in silver were worth more than 400 in paper. In 1816 the Austrian National Bank[2] was founded, mainly with a view to the withdrawal of these depreciated notes. A complicated scheme was set on foot for giving the holders partly silver and partly interest-bearing securities, the whole to the value of about 40 per cent. of the face-value. But the notes had not risen in the market to that level, and it was found that the resources of the bank were not sufficient to carry the scheme through. Redemption was suspended in August, 1816, after a seven weeks' trial.

Silver was then obtained by means of foreign loans, and after an interval of preparation the Bank found itself able to redeem notes regularly at 40 per cent. of face-value, though it was still unwilling to assume a legal obligation to do so.

Thus a man with 100 florins in 1811 would have received in exchange 20 florins of the new issue of that year, and for his 20 florins he would have received in 1820 cash to the value of about 8 florins. A drastic change of standard indeed! But it had the advantage that a metallic standard was actually restored, and remained in operation till the revolutionary movement in 1848. That movement, developing as it did into a war between Austria and Hungary, put a severe strain on Austrian finance. Inconvertible paper was again resorted to, and for the next twenty years a succession of attempts to get rid of it were brought to nothing by wars or preparations for war. In 1854-55 came the Crimean War, in which Austria-Hungary, though not actually a combatant, had important interests at stake, and was bound to stand by armed. The premium on silver rose at one moment to 40 per cent. With peace it subsided, and the currency was actually at par when there followed the disastrous war in Italy against Napoleon III., and the premium rose as high as before. In 1864 came the joint intervention with Prussia against Denmark, and in 1866 the war against Prussia, and also the Overend & Gurney crisis in England. The premium on silver florins which had been reduced in February, 1866, to 1·75 per cent., rose in the same year to 30 per cent.

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[1] See Dr. E. L. Hargreaves, *Restoring Currency Standards*, p. 78.

[2] See *The Austro-Hungarian Bank*, by Professor Zuckerkandi, a translation of which was prepared for the U.S. National Monetary Commission (Doc. No. 586).

There followed a period of recuperation, during which, however, the paper money (like the American greenbacks) did not at first improve very substantially in value. In the first year of peace, indeed, the premium fell to 23·95, and in 1868 to 14·43, but in the three years 1869-71 it averaged 21 per cent. It was only in 1872 (much later than in the United States) that the recovery became really marked, and in 1873 the crisis occurred. As in the United States later in the same year, the crisis had little effect on the value of the currency. The extreme stringency characteristic of a crisis, which might have raised the paper florin to par, was staved off by a relaxation of the regulations governing the note issue. The National Bank had been subjected since 1863 to the same system of a fixed fiduciary issue, as had been applied to the Bank of England by the Act of 1844, the fixed issue being 200,000,000 florins, and any excess over this sum having to be covered by silver (or gold). The extension of the note issue, combined with the interruption of the importation of foreign capital, prevented any considerable appreciation of the currency, and for two or three years the exchange on London remained at about 111 florins to £10, as compared with a par of 102·15. In 1876 and 1877, however, the growing depression of gold prices, combined with the threat of war in the Balkan Peninsula, caused a renewed depreciation, and in the latter year the exchange averaged 122·17. For Austria-Hungary, as for the United States, the revival of trade in 1879 brought an appreciation of the currency, and the exchange fell to 117·30. This was still far from the former par value. But the exchange on London measured the value of the florin in *gold*, whereas the florin still nominally meant $\frac{1}{90}$ of a kilogramme of pure *silver*. In 1879 the average price of silver was 51¼d. an ounce, and at this price the silver in a florin was worth 19·79d., so that 121·26 florins would be equal to £10. In fact, the florin as a monetary unit was already worth more than the silver it contained, and the metallic value of the currency was restored. If the coinage laws remained unchanged and silver could be coined without limit into florins on application at the Mint, silver would immediately become the standard of value, in fact as well as in theory, as it had been from 1820 to 1848. But the link which had formerly connected the values of silver and gold had been broken. To restore the silver standard would have been to abandon all stability in the exchanges with the gold-using countries, which included nearly all the most important trading nations of the world outside Asia. It was decided to close the Mints to silver, with a view to the eventual adoption of a gold standard. Even before the introduction of the gold standard into Germany and the consequent collapse of bimetallism the intention had been formed of adopting a gold standard in Austria-Hungary. Gold pieces of 8 and 4 florins, equivalent to 20 and 10 francs, were coined in 1870, and at the same time the National Bank began to accumulate a reserve of gold and foreign bills. It was natural, therefore, that in 1879, when the decision had to be taken, the Mints were closed to silver. The result was that for thirteen years the monetary unit was a paper florin with no definite metal value. It had been cut adrift from the old silver unit, and the corresponding gold unit at the old ratio of 15½ (which would have made the florin exactly equal to two German marks) had never been expressly adopted. The period of good trade and relatively high gold prices, which began in 1879, lasted till 1882. In that year a financial crisis in Paris heralded the reaction, and the Vienna exchange on London, which for three years had averaged between 117 and 118, rose to 119·6. It rose steadily till the depreciation of the florin reached a maximum in 1887, when 126·61 florins were equal to £10, and, still following the course of trade and of gold prices, the exchange then fell again to 124·22 in 1888, 119·55 in 1889, 116·05 in 1890, and 116·80 in 1891. So steady an appreciation of the florin seemed to promise an opportunity for fixing its gold value and introducing a gold standard as a permanency. It was too much to hope that the old par of exchange of 102·15 would be reached within any reasonable time, but it seemed safe to adopt a value corresponding to the average exchange over a series of years. A value which worked out at 120·087 was decided on. The new gold unit was to be the crown, which was to pass for half a florin, and a kilogramme of fine gold was to be coined into 3280 of these crowns. This made the par of exchange on London 24·0174 crowns to £1, and on Berlin 85·061 marks to 100 crowns. The legislation providing for the new coinage was passed in 1892. The date fixed for the definitive introduction of the gold standard was the 1st January, 1900, and in the interval steps were to be taken to withdraw all the Government legal tender notes and to replace them so far as required with silver subsidiary coin, and for the rest with notes of the Austro-Hungarian Bank based on gold. The Government took steps to obtain gold by means of foreign loans. But the first few years of the preparatory period were disappointing. Indeed, the year 1892 was an unfortunate one to choose. The expansive movement, which had been the true cause of the steady appreciation of the florin between 1887 and 1890, had already passed its zenith in Europe, although it had gained a further lease of life for a year or two in the United States, owing to the combination of an increase of the tariff, a splendid harvest, and an inflation of the currency through the silver purchases. Gold prices, as measured by Sauerbeck's index number, were 5 per cent. lower in 1892 than in 1891. Unemployment in the English trade unions rose from 2·1 per cent. in 1890 to 3·5 in 1891 and 6·3 in 1892. Vienna exchange on London rose ominously from 116·80 in 1891 to 119·29 in 1892, and by the end of the year was slightly above the new par. In 1893 the exchange grew more unfavourable, and after the crisis in the United States rose to a premium of more than 5 per cent. For the year 1893 the premium on sterling averaged 3·1 per cent. and for the following year, one of extreme depression and very low prices, it averaged 3·8 per cent. There was a recovery in 1895, but it was not till 1896, the same year that saw the end of the currency difficulties in the United States, that the premium was wiped out. Thenceforward, thanks to the period of prosperity and rising prices which prevailed in the gold-using world, the establishment of the gold standard was plain sailing. Gold prices rose in the four years 1896-1900 by about 25 per cent. The same causes which had brought down the exchange from 126·61 in 1887 to 116·05 in 1890 were again at work, but as the Austro-Hungarian Bank was now prepared to buy sterling at a fixed price the exchange could not drop far below its new gold par of 24·0174 crowns to £1 (corresponding to 120·087 florins to £10). There resulted a great strengthening of the gold resources of the Bank, which rose from 488 millions of crowns in 1895 to 920 in 1900 (inclusive of foreign bills payable in gold). The country then reaped the benefit of its struggle against adverse currency conditions in the years of depression 1893-96. It was ready to face the next trade reaction with ample resources to maintain the parity of its new gold unit. And in fact the gold standard weathered all storms till the outbreak of war in 1914, when it was swallowed up along with many more important human institutions and possessions in the maelstrom.

The course of events in Russia was in some respects similar to that in Austria-Hungary. Russia had her experience of an escape from a hopelessly depreciated paper currency by cutting the knot in 1839, when the existing notes were redeemed by means of a new issue at the rate of 2 roubles for every 7 of the old. Russia, too, had her troubles in the middle of the nineteenth century; not only the disastrous Crimean War, but the Polish rebellion contributed to her currency embarrassments. The paper rouble had nearly touched its silver par (4 francs, or 38d.) in 1863, but thereafter fell away and oscillated between 30d. and 33d. (with occasional falls below 30d. under the stress of political or financial crises) until the recrudescence of war over the Eastern question in 1876-78. In the autumn of 1877 it fell to 22⅜d., and though early in 1878 the expectation of peace produced a momentary rise to 26⅛d., it fell again to 22¼d. and did not revive till the general rise of gold prices at the end of 1879 brought it up to 25⅞d. and early in 1880 to 26⅛d. With the flagging of trade after 1882 the rouble declined, and after a slight recovery in 1884-85, due, perhaps, to a contraction of the note issue (from 973,000,000 roubles in 1883, to 900,000,000 in 1885), it was at little more than 23d. in 1886, and fell to 21d. in 1887, and momentarily even below 20d. early in 1888. In the latter half of 1888 began that revival of trade which tempted Austria-Hungary to embark upon a gold standard. Its effect was even more striking on the rouble than on the florin. By September the rouble had reached 26d. By the autumn of 1890 it had risen for a short time to 30d., and for 1890 it averaged 28d. The Russian Government was already accumulating a stock of gold and of gold balances abroad. But though the preparations continued, the new standard was not immediately fixed, and the rouble remained without any defined par value. In 1891 there was a rapid fall, and by January, 1892, the rouble was barely worth 23d. From this point, however, there was a recovery. This recovery, at a time when gold prices were falling calamitously, and other paper currencies were depreciating in proportion, calls for some explanation. This is to be found in part in the failure of the crops in 1891, which exaggerated the collapse of the exchange in that year, and left room for some recovery in spite of the adverse conditions abroad. An important factor was probably the increase of the Russian tariff (already highly protective) by 20 per cent. in 1891. By 1893 the rouble was settling down to a rate of approximately 25d., and the Russian Government determined to take measures to steady its value. Like the florin in 1879, the rouble was now close to its nominal silver parity, and the free coinage of silver was suspended in January, 1893. In the following year the Government resorted to what is now called an exchange standard. They drew bills payable in three months on their various agents in foreign countries, fixing the rate of exchange at 46·27½ roubles for 100 marks.[1] They then announced that the State Bank was prepared to sell these bills at this rate or to buy others at the same rate, and that they were obtainable at the Chancellerie de Crédit (Office of the Ministry of Finance in St. Petersburg), and at the offices of the Bank in a certain number of towns. In this manner a limit was fixed beyond which the market value of the rouble could not fall. The Bourse news had an announcement every day on the outside sheets of the rate at which the Government sold or bought bills. Like Austria-Hungary and the United States, Russia found the preservation of her standard facilitated by the trade revival which began in 1896. The new gold unit was fixed in December, 1895, the gold coin of 5 roubles (the half-imperial) being declared equivalent to 7½ paper roubles, and the Bank undertook to pay for notes at this rate till further notice.

The existing gold coins were based on the old ratio of 15½, which made the rouble worth 4 francs, or 38d. The new rouble was two-thirds of the old, and was therefore worth 2·66⅔ francs or 25⅜d. An ukase of January, 1897, authorised a coinage of the old weight and fineness of the imperials and half-imperials, stamped with the new denominations of 15 and 7½ roubles, and 5-rouble pieces followed in November, 1897.

Thus Russia and Austria-Hungary floated easily into the gold standard on the rising tide of gold prices. Both had started with their paper depreciated in relation to its nominal value in silver. Both had seen silver fall till a return to an effective silver standard would have been easy. Both had rejected the silver standard, and had passed through a period when their paper exceeded in value the only metallic unit to which it had ever been bound, but still fell short of the gold value corresponding to that unit in foreign monetary systems. The florin was worth more than $\frac{1}{90}$ of a kilogramme of fine silver, but was worth less than 2 marks. The rouble was worth more than $\frac{1}{50}$ of a kilogramme of silver, 900 per mille fine, but was worth less than 4 francs. Both countries fixed new gold values for their monetary units approximating to their market values. Neither debtors nor creditors could complain of such a decision ; debtors might have had to pay in gold at the old ratio ; creditors might have had to accept payment in silver.

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[1] See Report of Fowler Committee on Indian Currency, Appendix No. 59 (Memorandum by Mr. Hohler). The old rouble had been almost exactly 4 francs. As 100 francs are equal to 81 marks, 25 of the old roubles were worth at par 81 marks, and 100 marks were worth 30·86½ roubles. The new rate was 50 per cent. higher (subject to a very small margin). It was equivalent to 25⅜d., or, in the form in which the exchange on London was usually quoted, 94·58 roubles to £10.

The case of India differs from those of Russia and Austria-Hungary in that there was no period of irredeemable paper intervening between the silver and the gold standard. In China and the other neighbouring countries of Asia the silver standard persisted, despite the depreciation and the consequent confusion of the exchanges with gold standard countries. The relations between India and England, however, are so intimate that this state of things began to cause serious inconvenience. At the ratio of 15½ to 1, the rupee, weighing $\frac{3}{8}$ of an ounce of silver $\frac{11}{12}$ fine, had been worth about 1s. 11d. As silver fell the value of the rupee fell, and in the financial year 1878-79 [1] the average rate realised by the bills sold by the India Office was only 1s. 7·8d. For a year or two the fall was arrested, and in 1884-85 the rate was still as high as 1s. 7·3d., but then it fell again rapidly, and in 1888-89 averaged only 1s. 4·4d. A recovery to 1s. 6d. in 1890-91 (the year of the Sherman Act for the purchase of silver in the United States) proved to be transitory, and by 1892-93 the rupee had dropped to 1s. 3d. Nor did there seem to be any prospect of its stopping there. Silver had fallen to 38d. per oz. notwithstanding the silver purchases in the United States, and it seemed likely that these silver purchases would not be continued much longer. The fall in the rupee was embarrassing in two ways. It destroyed the equilibrium of the budget, since an important part of the revenue of India was absolutely fixed in rupees, while the Government had heavy liabilities regularly payable in sterling in London. But, what was ultimately more important, the instability of the exchanges introduced an element of uncertainty into all Anglo-Indian trade. The Government, acting on the advice of a Committee of which Lord Herschell was chairman, decided to stop the free coinage of silver, and, with a view to arriving ultimately at a gold standard, announced that British sovereigns would be exchanged on application into rupees at the rate of 15 rupees to £1, that is to say, 1s. 4d. a rupee. This undertaking, of course, could not in itself prevent the rupee from falling, though it would prevent it from rising above 1s. 4d. The suspension of the free coinage, however, would sooner or later tend to raise the rupee, and therefore there was reason to anticipate that eventually the rate of 1s. 4d. would become operative. From June, 1893, when the Mints were closed, the value of the rupee was determined just as if it were an inconvertible legal tender note. The total quantity of currency in the country was fixed, and so long as the Mints remained closed there was no way of increasing it except the importation of sovereigns, and so long as the exchange remained below 1s. 4d. sovereigns would not be imported. Nevertheless, the exchange continued at first to fall. In 1893-94 it averaged 1s. 2·5d., in 1894-95 1s. 1·1d., in 1895-96 1s. 1·6d. But in 1896-97 it rose to 1s. 2·4d., in 1897-98 to 1s. 3·3d., and at last in 1898 was at 1s. 4d. Thus after five years the system foreshadowed in 1893 was within reach. Another Committee was then appointed, presided over by the late Lord Wolverhampton (then Sir Henry Fowler). This Committee recommended that the sovereign should be made legal tender in India, and suggested measures for the purpose of encouraging the circulation of gold in the country. They contemplated a system under which the rupee would become a mere subsidiary coin, but they recognised that for the time being it was impracticable to limit the amount for which rupees were to be legal tender. They must continue to be coined so far as their place in the currency could not be filled by gold, but the Committee suggested that the profit on the coinage of rupees (which were by that time worth considerably more than the silver which they contained) should be accumulated in a separate reserve in gold, to be drawn upon as an alternative form of Government remittance from India to England, whenever the exchange should fall below specie point.

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[1] The year from 1*st* April to 31st March.

The Indian Government accepted these recommendations. British sovereigns and half-sovereigns were made legal tender in 1899, and an attempt was made to put these coins into circulation by redeeming notes and making other Government payments in gold unless the payees expressly asked for silver. But it soon became clear that the gold was not wanted. The Indian Government was still bound by its undertaking to pay out rupees in exchange for gold, and as fast as the gold was paid out it was presented for exchange into rupees. The effect was to substitute gold for rupees in the reserve held by the Government against the note issue, and the depletion of the rupees in that reserve soon became embarrassing. If in default of rupees it became necessary to insist on redeeming the notes in gold, the credit of the notes might be ruined. Indeed, a momentary failure of the supply of rupees at Calcutta in April, 1900, actually drove the notes to a discount of $\frac{7}{16}$ per cent. and gold itself to a discount of $\frac{1}{4}$ per cent. The remedy, of course, was to coin more rupees, and this was done. In the financial year 1899-1900 rupees were coined to the amount of 132 lakhs, and in 1900-1 1694 lakhs,[1] making the large total of 1826 lakhs, or £12,000,000. This raised the question of the accumulation of the reserve of gold, as recommended by the Fowler Committee, out of the profits of coinage. The failure of the attempt to force gold into circulation had enhanced the importance of this recommendation, and the recommencement of the coinage of rupees called for an immediate decision on the point. It was settled that the reserve should be created. Thereupon it was realised that if this reserve was ever to be used, it would be wanted in *London*. To accumulate gold in India would, therefore, be an unnecessarily cumbrous proceeding, as the gold would probably, in the first instance, have to be attracted or at any rate diverted from the London market, and would then have to be sent back to

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[1] A lakh is 100,000 rupees and a crore 10,000,000. So long as the rupee was about 2s., a crore meant about £1,000,000, and a lakh £10,000. With the rupee at 1s. 4d., they were £666,666 13s. 4d. and £6666 13s. 4d. respectively.

London whenever needed. It was decided to accumulate the reserve in London, and to hold it in the form of interest-yielding securities. This reserve, the gold standard reserve as it came to be called, was only to be used if the rupee began to fall below the prescribed value of 1s. 4d. (or rather a slightly lower value, say 1s. 3⅞d., corresponding to the export specie point).

For the next few years there was a continual demand for rupees—moderate at first and steadily growing greater. The Government received its revenue in rupees in India, and had to spend a considerable part of it in sterling in London, and for many years the practice had been to sell bills or telegraphic transfers on India in London. In fact, the Government came into the foreign exchange market to offer rupees in India in exchange for pounds sterling in London. So long as India had a system of free coinage, the Government merely sold just so many rupees in the year as would supply it with the money needed in London. But now it was not the sum sold that had to be fixed but the rate of exchange. If there was a demand for rupees and the exchange was tending upwards, the Government had to sell more rupees than were sufficient to supply its London requirements. Its balances of rupees became depleted and it had to replenish them. This could be done by buying silver and sending it to India to be coined. The silver was bought in London, and was paid for from the London balances, already swollen as much as the rupee balances were depleted. The rupees coined were added to the Indian balances, and the London balances were reduced by the sum paid for the silver, and *also* by the difference between this sum and the value of the rupees, the profit on coinage which had to be paid over to the gold standard reserve. Thus the London balance (apart from the gold standard reserve) was diminished by exactly the amount by which the Indian balances were increased. If the demand for rupees was so insistent that the Indian balances could not meet it, a reserve of rupees existed in the currency reserve, held against the note issue. The purchase and transmission of silver and the process of coinage took time, and in case of an unforeseen demand for rupees in the form of applications for bills in London, there might not be time to replenish the Indian balances with freshly-coined rupees. But the rupees in the currency reserve could only be drawn upon, just as they were drawn upon in 1900, if gold was deposited in their place. The note issue was based on the English fixed fiduciary issue system. There was a holding of securities to the value of 10 crores (raised in 1906 to 12 and in 1912 to 14), and all notes in excess of that amount had to be covered by rupees *or* gold. The gold might be either in India or in London, but wherever it was situated it had to be actual metal set apart; a bank credit payable in gold did not comply with the law. As it was sometimes awkward to have to withdraw gold from the Bank of England to replace silver coin in the currency reserve, it was decided in 1905 and 1906 to hold part of the gold standard reserve in the form of silver, the amount being fixed at 6 crores or £4,000,000. Throughout the period 1901-7 rupees were being coined, in moderate amounts at first, and then in very large amounts, and the gold standard reserve which was built up out of the profits of coinage was steadily increasing. Notwithstanding that in 1907 half the profits were diverted to other purposes, the reserve had reached a total by the end of 1907 of 17½ millions.

Then there occurred a sudden and complete change. The apparently insatiable demand for rupees ceased, and there began an equally insistent demand to reconvert redundant rupees either into gold or into gold credits in London. It became impossible to sell the usual bills on India in London within the prescribed minimum limit of the rate of exchange. The rupees, which would in a normal year have been paid out in India on presentation of the bills, accumulated in the Indian Treasuries, and in order to provide funds in London to meet the English liabilities of the Government, these rupees were paid into the currency reserve, and an equivalent amount of gold standing to the credit of that reserve in London was released. The metallic portion of the currency reserve was thereby maintained according to law unchanged; but gold was replaced by rupees. The gold held in India to the credit of the currency reserve was likewise paid out. At first the Indian Government hesitated to part with it, for it had the option of paying in rupees. But the exchange fell to a slight discount, and it was decided to pay out the gold freely.

At last, however, in March, 1908, it became clear that the suspension of the sale of bills and the release of gold in India were not sufficient by themselves to support exchange. It was decided to sell bills on London in India. The bills would be paid out of the sums held in London to the credit of the gold standard reserve, securities being realised for the purpose, and the rupees received for the bills in India would be held in India as part of that reserve. This measure accomplished its purpose. In the next six months bills to the amount of £8,000,000 were sold, reducing the London assets of the gold standard reserve from £14,000,000 to £6,000,000 and increasing the Indian portion from £4,000,000 (6 crores) to £12,000,000 (18 crores) in rupees. By that time the exchange was restored and the demand for the bills ceased, and soon the normal demand in London for the Secretary of State's bills on India revived. A very large quantity of rupees had been withdrawn from circulation. The paper currency reserve, which held 19 crores of silver and 16 of gold on the 31st March, 1907, held 31 crores of silver and 2 of gold on the 31st March, 1909. Thereafter there followed a steady outflow of rupees into circulation, and by 1912 the two reserves together held only 18 crores, and coinage was resumed.

The Indian experience from 1893 may be summarised as follows: From 1893 to 1898, the supply of currency was a fixed quantity and the rate of exchange varied, falling steadily to 1s. 1d. in 1894-95, and rising steadily to 1s. 4d. in 1898-99. Then the rate of exchange became fixed and the supply of currency variable. The actual increase or decrease in the amount of currency (rupees and notes, but not sovereigns) in the hands of the public can be accurately measured year by year, since the rupees once issued may be assumed not to be melted. The increase in the rupees in circulation is obtained by adding the new rupees coined to those in the currency reserve and the gold standard reserve at the beginning of the year, and deducting therefrom those in the reserves at the end of the year. The notes in the hands of the public are equal to the total note issue, *less* the notes in the Government balances and the Presidency Bank reserves. The results of these calculations are as follows :—

ABSORPTION OF CURRENCY (LAKHS).

	Rupees.	Notes.	Total.
1898-99	— 27	251	224
1899-1900	1123	172	1295
1900-1	1275	— 18	1257
1901-2	211	31	242
1902-3	345	259	604
1903-4	1059	328	1387
1904-5	794	36	830
1905-6	1466	417	1883
1906-7	1726	383	2109
1907-8	425	— 385	40
1908-9	— 1557	235	— 1322
1909-10	1403	503	1906
1910-11	392	19	411
1911-12	1066	444	1510
1912-13	1049	271	1320

The inquirer without Indian experience naturally hesitates to interpret these figures. India is, in area and population, and in variety of races and languages, a continent, and one in many respects profoundly different from Europe and the Americas. We must not hastily attribute to the Indians habits and points of view in currency matters which are appropriate to Europeans. Fortunately, we have available the reports, evidence, and other documents of three important inquiries into Indian currency and finance, the Herschell Committee of 1893, the Fowler Committee of 1898-99, and the Chamberlain Commission of 1913-14. Here we find the fruits of the experience of the foremost experts in Indian currency and banking.

On reading the official correspondence between the Indian Government and the Secretary of State, relating to the various administrative measures which were taken in the years 1899-

1912 for regulating Indian currency (Appendix V. to the Report of the Chamberlain Commission), we find three successive emergencies which had to be met. The first arose in the years 1899 and 1900, owing to the unexpectedly great absorption of rupees into circulation, 2398 lakhs in two years. The second arose in the years 1905-7, when, after a slack interval, the same conditions recurred, 3192 lakhs being absorbed in two years. The third arose at the end of 1907 from an equally marked return of rupees from circulation, 1557 lakhs being returned in one year. Explanations of each in turn are offered. Writing on the 28th June, 1900, at the height of the demand for rupees, Sir Edward Law, one of the Viceroy's Council, attributed this phenomenon in part at any rate to the severe famine which had occurred in the season of 1899-1900. "The great bulk of the population is purely agricultural. The agriculturist, in ordinary times, has little requirement for money in the shape of silver coin; he is himself the producer of a large proportion of the food he consumes, and his other wants which must be satisfied by purchase are trifling. In seasons of famine, however, the situation is changed. The food consumed by the suffering agriculturist must be purchased and paid for with coin, and as credit dries up in times of distress, all his other requirements must equally be paid for in cash.

"I think that we have only to consider the vast numbers who, under ordinary circumstances, produce their own food and enjoy credit for their small purchases and whose wants can now only be supplied by cash purchases, to realise the enormous increase in the circulating medium required to meet this unusual situation."

If we pass to the next period of strain we find quite a different diagnosis of the great demand for rupees. Writing semi-officially on the 18th October, 1906, an official of the Finance Department of India says: "The jute crop has been an excellent one and the prices have arisen beyond all expectation; they were all but double those of last year at the same season.

"There is reason to believe that the drain on the reserve will continue. The cotton harvest promises well, and it would not be safe to anticipate a smaller trade demand for rupees during the winter months than we had to face last year.

" The great activity of trade and the suddenness and magnitude of the demand for rupees which it forces on us have led us to consider carefully where to turn for assistance in case of need."

Finally, after the third crisis, that of 1908, when the difficulty was not to provide rupees for circulation but to withdraw the hundreds of lakhs of redundant rupees from circulation fast enough to save the exchange from depreciation below the gold point, the Indian Government wrote a despatch to the Secretary of State, dated the 1st April, 1909, reviewing the situation. " During the period from November, 1907, when exchange first fell substantially below 1s. 4d., until the end of January last, we lost 15 millions of our gold. . . . This is the result of a little more than a single year of adverse conditions and of a famine which was more restricted in its area than is frequently the case with similar calamities."

Confronted with these three opinions, the conscientious inquirer may be forgiven if he feels dissatisfied. If so severe a famine as that of 1899-1900 caused the great demand for rupees which marked those years, why did " a famine which was more restricted in its area than is frequently the case with similar calamities " have precisely the contrary result and produce an influx of redundant rupees and a demand for exchange? And why did a famine in 1899-1900 have the same effect as the good jute and cotton crops and the activity of trade in 1906-7?

The Secretary of State, replying on the 2nd July, 1909, to the Indian Government's despatch of the 1st April, pointed out that even if the famine was restricted " it occurred at a time when conditions were exceptionally adverse to the maintenance of exchange. The effect of the famine in reducing India's power of exporting certain articles was felt at a time when the foreign demand for the articles India was able to export was seriously restricted by commercial depression throughout a large part of the world, intensified, if not largely brought about, by the financial crisis in the United States of America."

In fact, the year 1907 had seen the culmination throughout the world of a period of very prosperous and active trade. The prices of commodities (including those jute and cotton crops the success of which promised a demand for rupees in the autumn of 1906) had risen steadily since the beginning of 1905, the average increase as measured by index numbers exceeding 15 per cent at the maximum. From about June, 1907, there began a decline in prices and set-back in trade, under the influence of which the credit position in the United States began to crumble. The crash came in October. Sometimes the ebb of trade is a gradual process extending over four or five years, marked at considerable intervals by a series of more or less grave crises in different parts of the world. Occasionally the reaction comes with the force of an explosion, and the whole commercial world passes in an instant from prosperity to extreme depression. This is what happened in the autumn of 1907. Early in 1908 the prices of commodities were already 10 per cent. below the maximum of 1907. Bankruptcy, unemployment, and distress were rife everywhere in a few months. The Indian currency system was saved for a short time from the full force of the storm, because it broke in the Indian busy season when there ought to have been a strong demand for rupees. It completely killed the usual demand, and did in fact for a moment send the rupee to a discount. In March, 1908, the busy season being over, it became necessary to sell bills on London in India in order to maintain the exchange. Thus the reason why it was necessary to withdraw 15 crores of rupees from circulation in 1908 was simply that the value of gold in commodities had risen, and but for this reduction in the quantity of rupees in circulation the value of the rupee *in gold* would have fallen.

The famine was relatively of secondary importance, but undoubtedly the Secretary of State was right about the nature and direction of its effects. A famine tends to make the foreign exchanges *unfavourable*. Russia had a somewhat similar experience in 1891-92, when a bad harvest happened to coincide with a decline in trade, and the rouble fell in a few months from 28d. to under 23d. Sir Edward Law's explanation of the demand for rupees in 1899-1900 was no more than an ingenious conjecture. The demand occurred at just such a time of good trade as was to occur again in 1906-7 with the same consequences. As we saw in the cases of Russia, Austria-Hungary, and the United States, the upward tendency of gold prices, in other words the depreciation of gold, which prevailed from 1896 to 1900 greatly facilitated the maintenance of a paper or token silver currency at a prescribed gold value. The experience of India was very similar to that of those countries. During the years of falling prices which followed the prosperity of 1888-91 the Indian exchange fell, reaching a minimum in 1895. Thereupon it began to rise, till in 1898 it reached the level of 1s. 4d., at which the Indian Government undertook to pay out rupees in exchange for gold. Beyond that point it could not rise, and the same influence, which had been raising the exchange, thenceforward spent itself in increasing the demand for rupees. It is a most striking fact that the period of rising exchange from 1896 to 1900 was marked by *two* severe famines, one in 1896-97 and the other in 1899-1900, and there was therefore some excuse for the theory put forward by Sir Edward Law. But the theory will not stand criticism for a moment. There may be more cash *transactions* in a time of famine than in a time of plenty, but that does not mean that people will hold larger cash *balances*. It is evident that the peasants who are unable to feed themselves from the produce of their own holdings will tend to pay away their money and to deplete their hoards. The lucky dealers who have food to sell may increase their balances, but taking all classes together the hungry population will, on balance, have parted with money in exchange for food. But from the experience since 1893 it may be quite safely inferred that famines are not among the most decisive factors in determining the course of the Indian exchange. The effects of the famines of 1896-97 and 1899-1900 at any rate must have been slight, since the upward tendency of the exchange was not interrupted by the first nor the demand for rupees by the second.

In India, as elsewhere, the state of the harvest must be regarded as *one* of the influences affecting the exchange. But the predominant influence is the world movement of credit with the consequent alternation of the depreciation and appreciation of gold. The Indian population, it is true, is more primitive than that of Europe. Banking is little developed. Hoarding is prevalent. Economic motives sometimes work in obscure and unexpected ways. But it remains true that the people can absorb rupees when they can sell at high prices, and they can sell at high prices when gold prices generally are high. The jute and cotton crops of 1906 sold at good prices because credit was expanding in Europe. The Indian growers of those crops wanted to be paid in rupees, while the proceeds of sale were paid in sterling in London. There was a demand for bills, by which the sterling could be transformed into rupees. The American crisis and the consequent shrinkage of demand in the gold-using countries spoilt the market for Indian exports. The disappointed traders had to draw upon their hoards of rupees to meet their expenses, and pay their taxes. A proclivity for hoarding and a slowness in reacting to changes of price would make India not less but more sensitive to currency movements elsewhere. If Indian traders do not raise prices they will sell all the more to Europe ; if they hoard the rupees that they receive and do not spend them they will buy all the less ; their capacity for absorbing rupees will be augmented in both ways.

Even before the shutting of the Indian Mints the currency systems of the East reflected the credit movements of the West. But the effect took the form not of a change in the volume of currency of either India or China, but of a change in the price of silver. Silver, like gold, derived its value partly from the fact that it would purchase goods. When an expansion of credit raised the money prices of goods in Europe it raised the money prices of Oriental goods along with the rest. Oriental goods could be purchased with silver and the demand for them was reflected in an increase in the price of silver. Credit in silver countries had not the same power of expansion as in gold countries, and therefore silver prices could not rise in the same proportion as gold prices, unless the quantity of silver currency was increased. From 1873, when the silver market became independent of the gold market, the price of silver regularly rose when trade was good and fell when trade was bad, though there was superimposed upon these fluctuations a general tendency to fall till about 1902, so that the rise was slight and the fall great. This merely means that the price of silver manifests the same tendencies as the prices of other commodities, and it has continued to do so quite as clearly since 1893 as before.

The essential feature of the gold exchange standard as established in India is the adoption of the rate of exchange as the index of the demand for rupees, and the issue and withdrawal of rupees accordingly. It does not really matter whether the rupees are issued or withdrawn in the process of selling exchange ; by whatever means they are issued or withdrawn the value of the rupee will be determined by the quantity in circulation. After the experience of 1908 some people argued that the gold held in India in the currency reserve, as, when paid out in exchange for rupees, it was not exported but remained in the country, was less efficacious in maintaining the rupee than the gold held in London, which came directly into the exchange market. But the gold in India performed the essential function of redeeming rupees. Even if it was not exported, it was not wanted as currency, but as a commodity, for the demand for gold ornaments was by no means completely interrupted by the adverse trade conditions. In proportion as rupees were locked up in the vaults of the Government, the power of the public to offer rupees in exchange for European goods was impaired, and the unfavourable exchange was redressed. It is a mistake to lay too much stress on the actual means of discharging the trade balance. An adverse trade balance may be *created* by a redundant currency and can be corrected by a contraction of the currency.

CHAPTER XXI.

THE GREAT WAR.

In this chapter I propose to refer very briefly to some of the effects of the Great War upon currency and credit, especially with a view to elucidating the monetary developments of the years which followed the restoration of peace.

The overwhelming extent and severity of the crisis which preceded and accompanied the outbreak of war in 1914 were due to the large proportion of the great financial and commercial nations of the world involved. The crisis began in the investment markets. Even before the Austro-Hungarian ultimatum of the 23rd July, 1914, to Serbia, there were unusually heavy sales of international securities, first from Vienna, then from Berlin, St. Petersburg, and Paris. The ultimatum brought war into sight. War, involving enormous borrowing operations by belligerent Governments, might be expected to depreciate existing investments to a great and unknown extent. Prices quoted in a market must be accommodated to the expectations of those who deal in it. If they fail to achieve this, the professional dealers will be embarrassed by an excess either of purchases or sales. In July, 1914, the investment markets could only discover a new set of equilibrium prices by a method of trial and error; they had to go on lowering prices to see if holders would be deterred from selling.

If for an interval the selling was not checked, the dealers would be encumbered with an increase in their holdings of securities. This process would not necessarily involve any transmission of funds from one centre to another, though if the pressure to sell at the level of prices reached were greater in one country than in another, the former would sell securities to the latter, which would thus become indebted to it. Any country where investors were panic-stricken would tend to sell to one where investors kept cool.

The stream of sales of international securities which poured out from the European centres had to find a market in London and New York. The sellers required funds in Europe, and the proceeds of the security sales in New York came into the exchange market for remittance either to the selling countries or to London.

The flow of funds to London was not due to English sales of securities. It was the consequence of London's position as an international clearing centre and an international lender. London was the most convenient place to hold liquid funds. There they could be most easily invested temporarily or, if the opportunity offered, re-invested permanently.

London was also the place at which many traders all over the world would find their obligations maturing. Everywhere trade was financed by bills on London; purchasers of goods had arranged for bills to be drawn by the vendors on London accepting houses or banks, and were under an obligation to provide the necessary funds in British currency to meet the bills at maturity.

Had the bills been drawn only to finance imports into England no difficulty would have arisen, for in such cases the proceeds of sale were received in sterling and could be applied to meet the bills. But a very large proportion of the bills represented goods destined for sale in other countries, and the importers, who would receive the proceeds of sale in the local currency, had to come into the foreign exchange market and buy sterling before they could meet their obligations to the acceptors in London.

So predominant was this London accepting business in the financing of international trade that the demand for sterling overshadowed all other demands.

On Monday, the 27th July, the first business day after the rupture of diplomatic relations between Austria-Hungary and Serbia, the New York foreign exchange market, congested with the demand for remittances to London, broke down, and the world felt the first dreadful thrill of panic. The exchange market between New York and London was an exquisitely sensitive nervous ganglion ; to touch it was to inhibit vital reactions throughout the organism of world finance.

Dealers in exchange found multitudes clamouring to remit to London ; hardly anyone wanted to remit in the contrary direction. It seemed that no quotation could be fixed which would come near to equalising supply and demand. Large sums of gold were hastily despatched, but gold could not be either shipped or insured in unlimited quantities, and the shadow of war risks was already falling on the insurance market. Exchange quotations became "nominal," and business was confined to isolated transactions, each separately negotiated at fancy prices.

One way of procuring ready money is to sell securities. The breakdown of the foreign exchange market made sales of securities in New York useless as a means of procuring sterling ; it diverted the stream of sales to London itself.

Panic was then in full swing, and security prices fell headlong. In rapid succession the Continental Bourses stopped working, and on the 31st July the London Stock Exchange itself closed. The New York Stock Exchange closed on the same day.

The closing of all the investment markets, combined with the collapse of the foreign exchange markets, cut off the clients of the London accepting houses from all means of providing funds in London. The accepting houses were threatened with imminent ruin. They were granted a moratorium (2nd August). But by this measure and by the closing of the Stock Exchange nearly all the readily realisable resources of the banks, except their actual cash in hand, were frozen up.

It was in these circumstances that the bank holiday of the 3rd August was prolonged for three more days, to allow time for planning remedial measures. The partial moratorium of the 2nd August which gave a breathing space to the accepting houses, merely passed on their distresses to the banks, which relied on bills and loans to the discount houses as the principal liquid resource beyond their cash. *Either* the banks must be given a moratorium too, *or* they must receive advances in some form to enable them to meet their demand liabilities. In the end they were given both. A general moratorium was instituted on the 6th August, and an issue of currency notes for £1 and 10s. was authorised in the form of advances to banks.

A moratorium could not settle anything; it could only give time for consideration and negotiation. Until remedial measures of a more permanent character had been adopted, the termination of the moratorium was bound to give rise to the very embarrassments that it had originally relieved.

In some cases all that was needed was special legislation relieving any debtors who could expressly show that they were prevented from paying by circumstances arising out of the war. But in the case of the accepting houses and banks which had accepted pre-moratorium bills, the mutual dependence of the credit of the great financial houses of the City necessitated a more drastic measure. The Bank of England undertook (with a Government guarantee) to discount all pre-moratorium bills without recourse to the holders, but this was not a complete solution, because the liabilities of acceptors, drawers, and any previous endorsers remained in being. Finally, the Bank agreed (still with a Government guarantee) to make advances to the acceptors to enable them to pay off the bills at maturity, and to extinguish all these liabilities. The acceptors were not to be required to repay the advances till a year after the end of the war, and meanwhile felt themselves free to undertake any fresh business not involving obligations extending over that period.

The weak point of this arrangement was that the advances were made by the *Bank of England*. The effect was bound to be inflationary. The issue of currency notes, together with the power given to the Treasury to suspend the fiduciary limit of Bank of England notes under the Act of 1844, had removed the statutory safeguards against inflation. The Bank of England was obliged, indeed, to exchange currency notes into gold coin on demand, but the circumstances were so peculiar that convertibility into gold was for the time being no preventive of inflation. Gold exports were impossible without the consent of the Government, because no one but the Government was willing to insure gold shipments against war risks. And in any case at this period gold was being sent *to* the country not *from* it. In effect London, the great international short-term lender, had been calling in its loans. It would not be correct to say that this was a deliberate act of policy, directed to providing funds for the war. It was the result rather of accident.

Under normal conditions the obligations of oversea clients to London accepting houses would fall due to the amount of several millions every day, and would be set off in the foreign exchange market against new business. The breakdown of the foreign exchange market in July originated in the sales of investment securities, but was immediately aggravated by the interruption of the usual supply of bills on London. The process of set-off became possible only on a very restricted scale, and the market remained exposed (even after the sales of investment securities had ceased) to a formidable one-sided pressure. When the emergency measures taken by the British Government in August and September, 1914, restarted the machinery of accepting, discounting, and remittance, London was enabled to lend again, and a part of the debts due to the accepting houses began to be paid. Payment was prevented in some cases by moratoria abroad, in others by the prohibitions against trading with the enemy, in others by the embarrassments of the debtors. But on balance the payments to London exceeded the new lending.

Far the most important channel of remittance was the New York exchange. Here the balance due to London made itself felt in a substantial premium on sterling, gold shipments across the Atlantic being still impossible. A simple remedy was found. The Bank of England offered to buy gold to be held not in London but in Canada. New York was enabled to buy sterling by sending gold across the land frontier to Ottawa, without war risks. The American banks were not willing to part with gold, and an abnormal premium on sterling persisted till November. But the gold actually sent was quite sufficient to remove the absolute deadlock that had arisen. Perhaps if the same remedy had been thought of at the end of July the deadlock might have been avoided altogether.

If England was acquiring gold despite inflation, the explanation is to be found in the violent reversal of the balance of payments which had been brought about. The curtailment of short-term lending for international trade was one aspect of this. Another was the suspension of long-term external investment. In the years immediately preceding the war the United Kingdom had been exporting capital to an amount not much less than £200,000,000 a year. When the London investment market closed down, almost all this export of British capital ceased. Nor was investment abroad allowed to revive during the war. New capital issues were controlled, and every effort was made to direct all the country's available savings to the war loans.

This tremendous disturbance in the balance of payments was dangerous, because it made room for a great expansion of credit without any adverse movement of the foreign exchanges. The huge advances by the Bank of England for the payment of pre-moratorium bills, along with a certain amount of advances by the Bank to the Government, were sufficient to provoke a high degree of inflation. Bank rate, at 5 per cent., became quite ineffective. The market rate for three-months' bills fell to 3 per cent. So long as the inflation had not gone far enough to bring down the foreign exchanges near to parity, it was actually intensified by the increase in the gold reserve.

Till the end of 1914 inflation continued without causing any depreciation of the pound. In December the exchange on New York reached parity, and the transmission of gold to Ottawa stopped.

Early in 1915 the market rate of discount in London fell below 2 per cent., and the exchange on New York fell in February below 4·80 (the peace-time gold export point was above 4·84). Thenceforward the foreign exchange situation became the dominant consideration in British war finance.

Inflation had gone too far to be easily stopped. In March, 1915, the Bank of England began borrowing from the money market, and in April the Government started the practice of keeping Treasury bills continuously on offer and selling them in unlimited quantities at a fixed rate. The Treasury bill rate entirely displaced Bank rate from the lead of the money market. If the Treasury did not raise enough money on bills, it would borrow directly from the Bank. This would increase the supply of money in the market, and discount rates would fall till the demand for Treasury bills at the fixed rate became sufficient again. If the Treasury sold more bills than were required and raised more money than it spent, the surplus either was applied to repaying advances from the Bank or accumulated in Exchequer balances and was withdrawn from the market. In either event the consequent scarcity of funds in the money market raised the discount rate, and the demand for Treasury bills at the fixed rate fell off.

Thus the discount market was governed by the Treasury bill rate, and the Treasury became responsible for credit policy and remained so (with one or two short intervals) up to April, 1921.

It was by no means generally recognised that the adverse movement of the exchanges (which brought the New York exchange down to 4·50 at the end of August, 1915) was due to inflation.

Up to the declaration of war between Germany and the United States in April, 1917, the problem of war finance presented itself to this country above all as the problem of financing imports. In order to make full use of the great advantage conferred by the command of the sea, it was necessary to make lavish purchases in neutral countries, and especially in the United States. The limit of those purchases was to be found nowhere short of the power of the United States to produce what was required and the possibility of transporting it to Europe.

How were those supplies to be paid for? The receipts of the Government normally took the form of credits in London. The American manufacturers wanted credits in their own country. If they had been willing to be paid with holdings in British war loans, no difficulty would have arisen. But they wanted to be free to spend the sums received as they pleased, and even those who were willing to invest them outside their own businesses wanted investments in their own country, paying interest and principal in their own currency.

The British Government accordingly resorted to three principal measures for providing the means of payment. In the first place, vast quantities of gold were sent, gold displaced from circulation by the new currency notes issued in England, gold freshly mined from within the British Empire, gold sent by France and Russia, gold which had come in a great stream from the United States to Ottawa after the outbreak of war when the exchanges were all in favour of London. The gold received by the United States from all these sources in the two and a half years from January, 1915, to June, 1917, was just $1,500,000,000. Next, a number of loans were floated in the United States, chiefly by England, but also by some of her allies, the interest and principal being payable in the United States in dollars. Thirdly, special arrangements were made for handing over British-held American securities to the Government, which could either buy them and sell them in America, or borrow them and pledge them as security for American loans.

In essence what happened was that Great Britain became indebted to people in the United States for the value of the supplies furnished, and had to find equivalent assets, in gold or securities, to pay the debt. The problem was quite accurately described as that of paying for our imports. At the same time this problem was really inseparable from that of paying for *all* our supplies. If the amount of genuine money raised at home was more than sufficient to pay for the warlike supplies purchased at home, that meant that the home consumer was abstaining from spending so much money on himself, and that an equivalent amount of the country's productive resources was set free for the production of goods for export. If, on the other hand, complete provision had been made for paying for all the warlike supplies purchased abroad, but nevertheless the home purchases were financed with inflated credits, the exchanges would be adverse. The excessive amount of purchasing power in the hands of the people would make a disproportionately attractive market for foreign goods (or securities), so long as the monetary unit remained at its nominal par. In fact, in that case, the inflation of credit, by financing the war with less than the due amount of sacrifice on the part of the people, would actually attract superfluous imports ; the problem was then not so much to finance the imports, as to avoid attracting them.

But, of course, loans from abroad may give invaluable assistance towards *avoiding* inflation, in that they supply additional resources beyond those which can be derived from taxation and legitimate borrowing at home.

And in so far as the object in view was to maintain the currency close to gold parity, this was facilitated by the tendency of the borrowing operations, and still more of the exports of gold, to excite inflation in neutral countries. In a war between two powers only in a neutral world this could hardly have occurred to any material extent. But when the greater part of the world was involved in the war, the general abandonment of the gold standard by the belligerent powers so narrowed the area in which gold continued to be used that the British exports of gold to the United States and to the other countries which still constituted that area, bore a very considerable proportion to their entire pre-existing stocks of gold. The United States could not digest $1,500,000,000 of gold in two and a half years, without being involved in an enormous expansion of credit. The flood of gold, indeed, caused some misgiving both in the United States and in other gold-using countries. In 1916 the three Scandinavian countries, Sweden, Norway, and Denmark, suspended the free coinage of gold and the purchase of gold by their Banks of Issue. Spain likewise bought gold only at a discount.

The United States took no such measures. The British Government was enabled to " peg " the exchange, that is to say, to keep it fixed by offering to sell dollars freely at a prescribed level. It was fixed at 4·76½, or about 2 per cent. below parity, from the beginning of 1916.

Nevertheless, inflation was raging. By April, 1917, when the United States entered the war, the English price level was double as high as in 1913. Taxation had been raised to a very high level, and great efforts were made to stimulate subscriptions to war loans. But the floating debt was dangerously big, and a part of the earlier war loans (those of 1914 and 1915) had been subscribed by the banks, with all the inflationary effects of floating debt. The advances made by the Bank of England for pre-moratorium bills had been repaid out of the war loan of 1915, but inflation had taken too deep a hold to be stopped.

The inflationary contagion in the United States itself became a source of embarrassment. It induced an abnormal activity of trade and made borrowing in the American investment market all the more difficult.

The Great War is conspicuous among all the wars of history for unsound finance. It would be difficult to parallel the easy-going alacrity with which inflationary methods were acquiesced in from the very earliest stages.

At the outset every European belligerent except Great Britain suspended specie payments. The fear of a currency break-down under the strain of war finance is perhaps the chief motive which leads Governments to accumulate vast reserves of gold in time of peace. It was after the Agadir crisis of 1911 that the German Government deliberately set out through the instrumentality of the Reichsbank to make a large increase in the country's holding of gold. France responded by making a large increase in the already very great reserve of the Bank of France. Both countries were certainly actuated mainly by a fear of war. The greater the gold reserve the longer the credit system can stand the strain of financing the Government without suspending specie payments, or, if specie payments are formally suspended but gold continues to be exported, without letting the paper currency fall to a discount.

The mere suspension of specie payments in 1914 by itself tended to diminish confidence in the currency—tended, that is, to make people less willing to hold balances of cash. In both Russia and Austria-Hungary, where gold was really needed for foreign payments, the loss of confidence betrayed itself at once in a depreciation of the currency in the foreign exchange markets. In France specie payments were suspended in face of a favourable exchange and actual imports of gold. There was a real tendency to hoard, aggravated, no doubt, by the imminent prospect of invasion. But a free use of even a small portion of the gold reserves of the country, then amounting to 3½ milliards of francs, might have restored confidence.

It is not quite clear why there was a run for gold in Paris. Anyone who could have foreseen the future would have had very good reason for preferring gold to the paper money of any belligerent Continental country. But did the people in the queue which formed to draw gold out of the Bank of France have any clear expectation of francs falling to a discount? More probably it was pure panic born of bewilderment.

And the same bewilderment existed in England in August, 1914. The idea prevailed that depositors would clamour for money from the banks. No one could offer any very intelligible explanation of *why* they should do so, but it had always been understood that war causes a run for gold. It was this state of mind that led to the moratorium concurrently with the issue of currency notes. But all the time the depositors remained perfectly calm. If there was a scarcity of cash that was mainly because the usual paying-in operations of the tradesmen were interrupted by the closing of the banks during the extended bank holidays.

The suspension of gold payments in France did not, as it turned out, make much practical difference. The exchange on New York remained favourable till near the end of 1914. French financial measures, however, were even more inflationary than British. The Bank of France, like the Bank of England, had to take over a quantity of frozen bills. But in addition, it had to make very heavy advances to the Government (totalling, by December, 1914, 3900 millions of francs). No additional taxation was imposed till 1916. There was not even a long-term loan till December, 1915, money being raised by creating a huge floating debt of *bons de la défense Nationale.*

France co-operated in raising funds in America, partly by borrowing, partly by contributing gold to the British Government, and partly by collecting American securities held in France. Nevertheless, Great Britain had to bear a large share of the burden of pegging the French exchange as well as her own. The support given took the form of large direct loans from the British Government to the French. France meanwhile shared with Great Britain the burden of lending to Russia, Italy, Belgium, and others.

The entry of the United States into the war created a new situation. The American Government lent enough money to enable Great Britain and France to keep their exchanges pegged, and any further use of the various resources till then employed for the purpose could be dispensed with. Inflation had already taken firm hold in the United States, and facilities were quickly set on foot to accelerate the process. The Federal Reserve system was amended (June, 1917) and the export of gold was prohibited (September, 1917). British and French currencies, therefore, were pegged on dollars, but not on gold. The premiums on the few remaining gold currencies became at times very high. In 1918, for example, the Dutch florin rose nearly 30 per cent. above par. For Scandinavian crowns and Spanish pesetas the figure was sometimes much higher. But the world market in gold had really ceased to exist. Indeed, there could hardly be said to be a free market in anything anywhere. All trade was subjected to drastic Government control, and most of it was actually in Government hands.

American assistance was also made available for the Indian rupee. The Indian currency system, like all others, had been profoundly affected by the war. At the outbreak of the war the sudden transformation of England from a lending to a borrowing country turned the exchanges against all the countries which had been financed by her, and in particular against India, the exchange falling to 1s. $3\frac{25}{32}$d. To restore equilibrium a contraction of the currency was necessary. Not only could not Council Bills be sold in London, but, as in 1908, bills on London (commonly called " Reverse Councils ") had to be sold in India in order to reduce the redundancy of rupees. The sale of these latter bills began on 3rd August, 1914, to the amount of £1,000,000 a week, and they were sold in the year 1914-15 to the amount of £8,707,000, the reserves held in London being depleted to an approximately equal extent. On the 5th August, 1914, the undertaking to pay sovereigns for rupees had been suspended.

Soon, however, an entirely different tendency supervened. The inflation of the currencies of all the belligerents occasioned a depreciation of gold in comparison with commodities. India was not exposed to the direct strain of war finance, and had no inflated paper currency. If the rupee was to continue on a gold basis it would have to depreciate along with sterling. The supply of rupees had therefore to be increased. This phase took some time to develop. It was not till September, 1915, that the last bills on London were sold in India. But by the beginning of 1916 the sales of Council Bills had reached a high level. In 1914-15 the circulation of rupees and notes had diminished by 1013 lakhs. In 1915-16 it had increased again by 1827 lakhs. In 1916-17 the demand for currency far surpassed all previous records, rising to 5199 lakhs. As against this there must be set, it is true, a diminution in the absorption of gold, but the gold formerly imported was not for the most part used as currency.

Of the additional currency 787 lakhs in 1915-16 and 1813 in 1916-17 were notes. Yet to maintain the supply of rupees enormous purchases of silver were required. But the price of silver, after having remained low, began to rise in November, 1915, when it reached 27d. per ounce. In May, 1916, it rose to 37d., reacted, falling as low as $28\frac{5}{8}$d. in July, and recovered in December to 37d. In the course of 1917 the price rose above 43d. (which was the melting-point of the rupee) and, indeed, leapt up with another unstable spurt to 55d. Though this high figure did not last, it became impossible to maintain the exchange at so low a figure as 1s. 4d.; devices for keeping it down by agreement among the banks and for controlling the supply of silver proved ineffective. At last it was decided to raise the rate of exchange for Council Bills to 1s. 5d. and in 1918 to 1s. 6d.

At this point the United States supplied a very timely resource in the form of huge silver reserves. The silver bought in the years from 1879 to 1893 was still there. A little was in circulation, but most of it was held in reserve against the issue of silver certificates. If the silver certificates could be replaced by another form of paper money and withdrawn, the silver could be disposed of in the market. This supply (the equivalent of the silver in more than 10,000 lakhs) was more than sufficient to maintain a limitation of the price of silver to 101½ cents a fine ounce till after the end of the war. That was a price within the melting-point of the rupee at 1s. 6d. When in May, 1919, a free market was restored, $259,000,000 of silver (equivalent to about 6000 lakhs) had been sold.

Meanwhile measures had been taken to give greater elasticity to the Indian note issue. In 1916 the fixed fiduciary issue was raised from 1400 to 2000 lakhs. In 1917 the system of a fixed fiduciary issue was practically abandoned, the securities being increased by the purchase of British Treasury Bills to 4849 lakhs. In 1918 the minimum denomination of the notes was reduced from 5 rupees to 1 rupee—a measure which might have saved the exchange standard had it been adopted at an earlier stage and had the conservatism of the population admitted of a wholesale substitution of paper for coin as the accepted means of payment.

Germany and her allies had to get on without any such economic reinforcement as the United States brought to their antagonists. For them the problem of financing imports can hardly be said to have been a serious one, for from the beginning of the war they were cut off from the opportunities of gaining any but a very moderate amount of material assistance from neutral resources, and, as time went on, their external trade was reduced almost to vanishing-point.

No pegging of the exchanges was necessary. But it is hardly necessary to say that the penalties of inflation were not escaped on that account.

At the outbreak of war a series of emergency measures were put into operation. Gold payments were suspended; various measures of relief to debtors were put into force; an organisation was created for making advances to traders on every kind of tolerable security, and a special issue of paper money (loan bank notes) was made as a medium for these advances.

As in France, no new taxes were imposed at first, and to the end of the war taxation was inadequate. On the other hand, a series of regularly-recurrent half-yearly war loans gave the appearance of highly systematic finance. But all the time the advances by the Reichsbank to the Government were growing. By the date of the Armistice the bills held by the Reichsbank (almost entirely Treasury bills) exceeded 20 milliards of marks. The special loan bank notes (which often represented advances on Government securities) had reached 10 milliards.

Germany was carrying much of the financial burden of her allies. Even apart from the shock of defeat, the financial fabric of the Central Powers was much nearer breaking-point than that of the Entente Powers. At the time of the Armistice, when there was a prospect of the foreign exchange market regaining some significance, the German currency was depreciated 50 per cent., and tending to fall further.

CHAPTER XXII.

AFTER THE WAR.

In the interval between the Armistice in November, 1918, and the signature of peace in June, 1919, the flood of war expenditure was subsiding, but Governments found themselves confronted with new financial burdens on all sides. To the cost of demobilisation and the liquidation of heavy war-time liabilities were added a variety of new sources of expenditure. The rationing of foodstuffs among people who did not understand the effect of inflation on prices involved Governments in huge food subsidies. In many parts of Europe (especially, of course, France) incalculable sums had to be found to repair regions devastated by invasion.

In England and the United States the first effect of the cessation of hostilities was a set-back to the intense activity of production, which had been evoked by the needs of the war. There was a pause in the rise of prices in both countries.

The British Government's system of supporting the exchange at a fixed rate of 4·76½ by selling dollars borrowed from the U.S. Government could not be continued indefinitely. It was brought to an end in March, 1919. A grave decision had then to be taken. Currency notes were convertible into gold coin on demand. Under war conditions no one would ship gold unless it was insured against war risks, and no one would insure it except the Government. The Government was in a position to prevent it from being sent even when, as in the summer of 1918, a profit of 25 or 30 per cent. could be secured in Holland. Such great divergences of the exchanges from the gold points no longer existed, but the profit on gold exported to neutral countries was still abnormally high, and the Government's power of preventing export was ended by the return of peace.

If notes remained convertible into gold, and all obstacles to the export of the gold were removed, the exchange would be supported by a limited gold reserve instead of an unlimited supply of dollars. It looked as if in that case only a very severe restriction of credit would save the gold reserve from early exhaustion. To start peace time with a trade depression seemed an appalling prospect.

A proclamation was issued prohibiting the export of gold. The gold standard was abandoned, and cheap credit was retained. The Treasury bill rate, by which the money market was governed, was 3½ per cent.

Government borrowing was continuing on a great scale, and its inflationary effect was soon reinforced by a revival of trade borrowing. The caution which followed the Armistice soon evaporated. By May prices were rising rapidly, and in June the index topped its highest war-time level.

In June the Victory and Funding Loans were issued with a view to consolidating a portion of the floating debt. To favour the loans, cheap money was made cheaper still,[1] but the trade activity which resulted from inflation militated against the success of Government long-term borrowing, and the loans did not produce enough cash to make any but a very fleeting reduction in the floating debt.

Expenditure continued to exceed revenue till December, 1919, but inflationary Government finance was outdistanced by inflationary trade borrowing. Bank advances in the United Kingdom (as calculated by the *Statist* from annual balance sheets) rose from £637,000,000 in December, 1918, to £1,018,000,000 in December, 1919.

Thereby was restored the power of the banks to control the situation, and it seems clear beyond doubt that that power ought to have been used. A high rate of interest on advances would have kept one cause at any rate of inflation within bounds. As the inflation itself was the chief obstacle to the absorption of funding loans in the investment market, there would have been a double advantage in a deterrent rate. It was only necessary to turn the corner, and the deterrent rate would soon have given place to a period of low interest and a favourable investment market (see pp. 152-3).

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[1] The sale of Treasury bills, which had been on offer at 3½ per cent., was suspended, and funds were raised instead by borrowing at call at 3 per cent. through the Bank of England from the money market.

The extent of the pressure for capital is illustrated not only by the rapid rise in bank advances, but also by the enormous total of £300,000,000 of new capital issues (exclusive of Government borrowings) for British industrial and commercial enterprises in 1920. It was quite without precedent for home needs to figure so largely among London issues. Of the bank advances themselves, too, a not inconsiderable proportion were devoted to fixed capital requirements, such as extensions of plant.

The United States also experienced an after-war inflation, which was stimulated by a low discount rate. But there the tendency was moderated in two ways. First, Government borrowing did not last so long as in England. The September quarter of 1919 was the last quarter to show a deficit. For the December quarter revenue exceeded expenditure by $154,000,000. Secondly, the prohibition on the export of gold from the United States, which had been in operation since September, 1917, was lifted in June, 1919. The countries in the world which had succeeded in preserving the gold standard, and were prepared to buy gold as money, were few. Nevertheless, substantial gold exports followed to Spain, to Argentina, to Japan, and to other parts of the Far East and South America.

The loss of gold from the United States did not, it is true, lead to the adoption of earlier or more severe measures of credit contraction than in England. The American rediscount rates were raised after the English Bank rate, not before. But large exports of gold themselves have a restrictive influence. So long as currency is convertible into gold, and the gold can be exported, prices of foreign trade products approximate to world prices. The exported gold serves to purchase foreign commodities, which compete with the home products and keep prices down. The starting of the vicious circle of inflation is not altogether prevented, because the expansion of demand affects all commodities, and raises the prices of home trade products, but the inflation is retarded.

In 1919 the inflation was very materially slower in the United States than in England, and the result was seen not only in the disproportionate rise of the price index in England, but in the fall of the American exchange. The exchange had been pegged at 4·76½. It was freed in March, 1919, and began falling soon after. It ended the year at 3·76, or 23 per cent. below par, and was still falling.

During this period of inflation the progress made towards the restoration of normal currency conditions was *nil*. Rather there was a widespread and rapid retrogression. The inflation in England and America was only a part of the story. The neutral states of Europe, Holland, Switzerland, Spain, and the three Scandinavian countries, had experienced effects resembling those of high protection, owing to the obstruction of their imports during the war. Their currencies had been at one time at a high premium over the American dollar. Some time before the Armistice, probably in view of the imminence of large purchases of food and raw materials from America on the return of peace, the premium began to ebb away. In the first half of 1919 all these currencies (except that of Spain) fell to or below par. From then onwards, though the depreciation of the United States dollar in relation to commodities might have been expected to make the retention of the gold standard easy, they fell lower and lower. As in England, the after-war inflation in these ex-neutrals of Europe outstripped that in America. Heavy as their expenditure had been during the war, it was of course a mere trifle compared to that of the belligerents, and the inflation in their currencies cannot be explained as due to the strain on their Government finances. Probably they could have avoided inflation altogether; almost certainly they could have kept up to parity with the dollar, despite their shortage of stocks of commodities and their urgent capital needs. That they failed to do so was probably due to the contagion of the English inflationary movement.

The belligerent states of Europe, having to bear the full brunt of war burdens with much less financial strength than Great Britain, were in a more parlous condition. For them the possibility of checking inflation by redeeming floating debt can hardly be said to have arisen. Any question of controlling trade borrowing through discount policy, or by any other means, remained irrelevant to their circumstances, for they continued submerged in the welter of war finance at its worst. It was a question of finding any expedient to meet the day-to-day liabilities of government. To the cost of maintaining armies on a war footing succeeded the cost of demobilisation, and on the top of that the pressing necessity of financing indispensable supplies of food and materials. In 1919, after their war experience, people had become accustomed to a fairly substantial depreciation of redundant paper money. But they had either forgotten the assignats and other historical precedents, or, at any rate, could not believe that such a collapse would be repeated.

A flood of imports poured in from those parts of the world which had escaped economic exhaustion, and especially from the United States, to make good the shortage of commodities in Europe. European markets seemed at first to display an illimitable power of purchasing goods at higher and higher prices. But the moment the American exporter tried to remit the proceeds of his sales home, the exchange turned against him. To practical men a German mark meant 23·82 cents. If for the time being the market quoted it at 6 or 4 or 3 cents, they attributed the fall to an adverse balance of trade. Once Germany's urgent needs for imports were satisfied, surely, they argued, the mark would recover, perhaps not to its old parity (for loss of credit through defeat in war might prevent that), but at least to the 12 or 15 cents quoted after defeat had occurred and before the imports had begun. Rather than sell their marks at a ruinous sacrifice, many of them held on. But some of the exporters either did not share this view, or else could not afford to wait. The artificial support of French and Italian currencies had been withdrawn at the same time as that of the British in March, 1919. Not only marks, but all European currencies were being continuously sold, and were as continuously depreciating. This process was a sign that the rate of exchange was not at equilibrium point (see p. 67). It had to continue till the consequent diminution in the purchasing power in world markets of the users of the depreciating currencies was great enough to bring down their importing power to the limits set by their exporting power, *plus* any credits or loans that could be raised abroad. Those traders and speculators who acquired holdings of the currencies and kept them in hope of a rise, instead of selling them in the market, delayed the process of adjustment. They were, in effect, *lending* to the country whose currency they held, and so helping to bridge the gap between exports and imports.

The continuous fall in European currencies eventually frightened not only the American exporters but the banks which were financing them. By the 31st December, 1919, French or Belgian francs were worth only $\frac{2}{5}$ of their par value in dollars, Italian lire $\frac{1}{3}$, German marks $\frac{1}{12}$, Austrian crowns $\frac{1}{33}$. Other currencies of Central and Eastern Europe were intermediate between the mark and the crown. With Russia economic relations were severed, and there was no exchange market.

In January, 1920, the New York rediscount rate was raised to 6 per cent., and the patience of the American banks gave way. Advances to exporters on the security of European currencies were called in. The depreciation of these currencies, rapid as it had been, was accelerated to the point of panic. By the first week in February sterling had fallen to 3·20, a discount of 34 per cent.; francs and lire had fallen heavily; marks, crowns, and other collapsed currencies were barely half what they had been a month before.

This exchange panic marks a stage in the great post-war currency crisis. It was followed by a general recovery, delayed a little in the case of francs and marks by the political complications arising out of the Kapp Putsch in March and the French occupation of Frankfort (6th April—17th May).

By June, 1920, all European currencies (with one or two unimportant exceptions) were above the level of the preceding December.

By cutting their losses the American exporters and the speculators had turned the greater part of their loans to distressed Europe into free gifts. They had also in the process relieved the exchange market of an incubus in the shape of a vast disappointed bull account. During the whole period of depreciation, beginning with the "unpegging" of the exchanges between sterling, dollars, francs, and lire in March, 1919, and especially during the weeks of panic, people in Europe had been paying away their own currencies in exchange for much-needed supplies. The continuous rise in the prices of commodities was an inducement to pay away money for goods, and to cut down cash balances to the lowest possible limits. In other words, the circuit velocity of money had been increased. When the crisis was over, the reduction of cash balances was an element of strength in the market. People who found that they had cut down their ready cash below the limits of convenience had to borrow or to sell in order to make good the deficiency (see pp. 257-8). The prices both of commodities and of foreign currencies in the distressed countries began to fall, and the stagnation of balances or diminished rapidity of circulation characteristic of a period of depression or falling prices supervened.

So long as the Governments of Central and Eastern Europe failed to balance their budgets, the recovery could only be temporary. The excess of imports, which had been swamping their exchange markets, and which was a transitory phenomenon, was not the true cause of the depreciation. So long as it continued it was merely a sign that the existing depreciation, as recorded in the market, was *insufficient*, and that equilibrium was not secured. The cause of the depreciation was the perpetual over-issue of paper money. The recovery in the exchanges and the decline in the prices of commodities for the moment facilitated the absorption of paper money, and this condition of things, once started, tended to persist till the over-issue of paper money again became sufficient to bring about a renewed inflation and an increased rapidity of circulation. This spasmodic alternation of panic and recovery illustrates once again the inherent instability of credit.

British currency and the currencies of the European neutrals participated both in the exchange crisis of February, 1920, and in the subsequent recovery. At the beginning of March it was learnt that gold was being sent from London to New York. (This, of course, could only be by authority of the Government, since the export prohibition was in operation.) The exchange recovered to $4·00, making the discount on sterling no more than 18 per cent.

In England the financial position of the Government is always strongest in the March quarter (the last of the financial year), when the greater part of the income tax is collected. The quarter ended 31st March, 1920, was the first since 1914 in which revenue had exceeded expenditure. This, combined with the recovery of the exchange, was encouraging. The end of inflationary Government finance was in sight. The budget for the new financial year ending 31st March, 1921, when it appeared, did, in fact, provide for a large surplus.

But whatever the ultimate prospects of the year as a whole were to be, the seasonal position of the Exchequer was becoming unfavourable, with the completion of the income tax collections. Moreover, the gigantic floating debt was a perpetual menace to the credit situation. Early in April, 1920, Treasury bills sales being inadequate, it became necessary for the Government to borrow large sums from the Bank of England.

The policy of " cheap money " had already been abandoned in November, 1919, when the Treasury bill rate had been raised from 3½ per cent. first to 4½ and then to 5½ per cent. The Bank rate had been raised to 6 per cent. But yet, by comparison with the profits of traders in the state of inflation then raging, 6 per cent. was a low rate.

It had gradually become clear that the discount rate, and therefore the Bank rate, was the key to the situation, not so much because more Treasury bills could be sold if offered on more attractive terms, as because the high rates would react upon trade-borrowing and discourage it.

On the 15th April, 1920, the Bank rate was raised to 7 per cent., and concurrently the Treasury bill rate was raised to 6½. The system of selling Treasury bills at a fixed rate helped materially to make a rise in the Bank rate immediately effective. A 7 per cent. Bank rate could hardly be called high in the circumstances. Much higher rates have been used in the past to cope with less violent inflationary movements. But the effect of a movement of the Bank rate is largely psychological. It is required to offset not the profits that traders have been making, but the profits that they expect to make in the future. If they can be brought to moderate their expectations, a comparatively low rate will be deterrent. Conditions in the spring of 1920 were so obviously unsound, and the Government and the Bank of England were so evidently determined to stop the inflation, that 7 per cent. turned out to be enough.[1]

This was the end of the after-war inflation in England. In America the governing factor was the state of the reserves of the Federal Reserve Banks. Since June, 1919, these had been steadily depleted by gold exports, and the reserve proportions had been further diminished by an expansion of liabilities. The gold situation was being eased, partly because first Spain and then Argentina were reaching saturation point and ceasing to import, partly because gold was coming from England. But in May, as the result of a financial crisis in Japan, the exchange on that country, which had preserved the gold standard, jumped up above the gold point, and large gold exports thither were threatened. At the same time the deposits and note issues of the Federal Reserve Banks were growing.

The New York Federal Reserve Bank had already put up the rediscount rate to 6 per cent. in January, 1920. On the 1st June the rate was put up to 7 per cent. There, as in England, 7 per cent. proved to be sufficient.

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[1] The fixing of a limit for the fiduciary issue of currency notes in December, 1919, helped to convince people that the subsequent deflationary measures were meant seriously (see p. 99).

Thus the after-war trade expansion came to an end in America also. There ensued a period of deflation, the intensity of which it would be hard to match from the economic history of the past two centuries. The nearest approach to it is to be found in the depression which began in England with the crisis of 1814. In the countries with collapsed currencies the deflationary movement which followed the exchange crisis of February, 1920, soon evaporated. Their monetary situation remained very unstable. The region in which the deflation developed in all its severity was composed of the United States, the British Empire, the European neutrals, the Entente Powers on the Continent and Japan. The pace was set by the United States, where the gold standard was still operative. The 7 per cent. rediscount rate remained in operation there for nearly twelve months. Spain had already lapsed from the gold standard in January, 1920, and Argentina and Uruguay, as soon as they began to lose their gold, followed suit. Japan, the only other gold-standard country, was at first experiencing an even more rapid deflation after its financial crisis, and was taking gold from the United States. Thus the gold standard, which had mitigated the inflationary movement in 1919, did nothing to relieve the contrary movement in 1920. The prices of commodities fell remorselessly. The index of wholesale prices (the revised index number of the Bureau of Labour, expressing prices as a percentage of those of 1913) had risen from 193 in February, 1919, to 233 in January, 1920, and then, after a pause, to 245 in April and 247 in May. Therefrom it declined, with growing rapidity, to 179 in December, 1920, and 141 in July, 1921. That meant that the purchasing power of the dollar (and therefore of gold) had risen in little more than a year by 75 per cent.

When deflation was started in England, it was, no doubt, with the intention of restoring sterling to par. It might have been expected that all the monetary problems dealt with in Chapter XV. would thereupon have arisen. That the gold value of the pound sterling would not be tampered with might be taken for granted. But the question of devaluation would arise in other countries. And in all the rate of progress to be set towards currency restoration would require careful planning.

Not at all! It was all that England or any other country could do to keep pace with the United States in the breathless pursuit of deflation. Cases have been mentioned in earlier chapters[1] where plans for the restoration or maintenance of the gold value of a paper or token currency have been upset by a rise in the commodity value of gold, or, in other words, a fall in gold prices of commodities. But all have been eclipsed by this tremendous appreciation of gold. The greatest stress came in November, 1920, at the height of the seasonal crop-moving strain upon the American credit system. Throughout Europe the minima recorded in the foreign exchange market during the panic of the preceding February were approached, and in nearly all cases passed. British, Swedish, and German currencies were a little better at the worst than in February. The currencies of South America and the East (with the exception of Japan, which was tied to the United States by the gold standard) being themselves subject to little or no deflation, faithfully reflected the appreciation of the dollar.

The price of silver (with which, of course, are associated the Chinese exchanges) showed particularly instructive movements. A free market in silver was restored in May, 1919 (see p. 404). The controlled price of 101½ cents per ounce fine was 66 per cent. above the average of 1913, which was 61·24 cents.[2] The index of wholesale prices generally in America in May, 1919, was 102 per cent. above the level of 1913. Silver was therefore relatively below the average of commodities. In the remainder of the year it overtook the lost ground, and by December was at 133·07 cents, or 119 per cent., above the level of 1913. The corresponding percentage for commodities was then 123. Silver had almost made up its leeway. But silver differs from ordinary commodities in being used as money. In China, where it is the standard medium of exchange, there was no reason why the demand for it should be appreciably modified, seeing that its purchasing power was at the normal pre-war level. But in other countries, where silver is used for token coinage, the silver coins would tend to be melted down as soon as their bullion value exceeded their monetary value. For the standard dollar of the United States this point is reached when silver is at 129·29 cents, and that price had already been passed. The profit on melting was still small. But in Europe, where gold currencies had been replaced by depreciated paper money, the profit was much greater. In England, where the melting-point of the token currency was 66d. per standard ounce (equivalent at par to 144·69 cents per fine ounce), the price of silver rose at one time in February, 1920 (owing to the heavy depreciation of sterling), to 89½d. The melting of the coin by the public was prohibited by law, but it was decided to alter the standard fineness from 925 per mille to 500, and to enter upon a recoinage of all the silver in circulation.

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[1] See pp. 327-8, 340-1, 356-7, 366-7, 374, 387.

[2] The statistics that follow of the price of silver are taken from the *Federal Reserve Bulletin* for June, 1922.

The melting of silver coin was a large potential source of supply, and in the new year the price of silver rapidly fell again below the general average of commodities. In May, when the American commodity index was at its maximum of 247, silver, at 103·5 cents, was back at 169 per cent. of the price of 1913. Thereafter, though commodities fell, silver fell even faster, and in February, 1921, was actually below the price of 1913.

The rise of silver to 89½d., a price which had not been touched since the reign of Edward VI. (see pp. 281-2), excited a good deal of astonishment, and various explanations were offered. In reality, what required explanation was not the rise (which merely reflected the fall in the purchasing power of sterling) but the subsequent fall, being much more than in proportion to the fall of prices generally. Whether the melting of silver coin is by itself an adequate explanation is impossible to say. The fall of price itself brought the bullion value of British and American silver coin and that of the ex-neutral states below melting-point, and the United States Mint was bound by the Pittman Act of 1918 to buy back from the American producers at $1 an ounce as much silver as had been sold from the Treasury's reserves to India under that Act. But a number of recoinage schemes that had already been set on foot, in Great Britain and elsewhere, to reduce the silver contents of the subsidiary coins, remained to swell the supplies of silver for years to come.

The Indian rupee had been, since 1917, practically on a silver basis. In 1919, when the control of the silver market was withdrawn, the exchange had to be raised to 1s. 8d., and thereafter it was pushed up from time to time as the value of the silver in the coined rupee rose. By February, 1920, it was 2s. 4d.

The exchange standard had broken down, not through any appreciation of silver or of the rupee, but through the *depreciation* of gold and of sterling. The rupee could keep pace with the depreciation of sterling till it fell to the level of the value of the silver in the coin, and then could fall no further. (It was not thought practicable either to recoin all the rupees in circulation or to replace them with paper money.) India was saved from the extreme effects of the after-war inflation, and the Committee on Indian Currency and Finance, presided over by Sir H. Babington Smith, which reported early in 1920, recommended a policy which was designed to preserve this advantage. The rupee was to be tied not to sterling but to gold. Gold, it is true, had itself been depreciating. But it was possible to set a limit to the process. The reserve proportions of the Federal Reserve banks were already very low, and the raising of the rediscount rate to 6 per cent. in January was a sign that remedial steps were to be taken. There had followed the exchange panic, and a pause (though a temporary one) in the rise of prices in America.

A further rise in the gold price of silver was also unlikely. The melting-point of the standard silver dollar was a distinct stage in the process.

There was therefore a better prospect of stability with a value fixed in gold than with a value fixed in sterling, which had fallen in less than a year from 4·76 to 3·20, and might quite possibly fall further. Accordingly, the rupee was fixed at 2s. gold, or 48⅝ cents. For a short time this value was effective. But the deflationary movement in America introduced an entirely new and unforeseen element into the problem. If the new gold value of the rupee was to be sustained, the commodity value of the rupee would have to be raised as fast as the commodity value of gold. Twice before had the rupee been successfully kept up to par by withdrawing rupees against gold or sterling assets (pp. 383 and 403). In 1920 very large resources were available for the purpose in the Gold Standard Reserve and the Paper Currency Reserve, and a start was made with the sale of bills on London (" Reverse Councils ") in India. But on this occasion the machinery was not worked in the old way. There was some hesitation in drawing upon the gold and sterling assets ; the sale of bills was limited to a fixed weekly amount ; rupees which had been withdrawn were lent to the Indian Government and paid out again. In April the new gold parity was lost, and in the end there was practically no deflation in India at all. Perhaps this accorded more closely with the essential aims of the Babington Smith Committee's recommendations than a desperate adherence to the new gold parity. The rupee remained *stable*. The depreciation that brought its gold value down to 26¼ cents at the end of 1920, and even lower in the course of 1921, was for the most part only apparent. It was gold that had appreciated.

This is equally true of other currencies which apparently depreciated heavily during the same period. In fact, every country was faced with the choice of letting its currency fall in relation to gold or undergoing the trade depression and unemployment inseparable from deflation. The Argentine peso (paper) fell from 43 cents in April to 33 in December ; the Brazilian from 26½ to 14¼ ; the Chilian from 23½ to 13¼. (The first-named fell less in proportion, because for a short time it was sustained by the gold standard, the gold par being 42·45.)

The new year, 1921, saw a substantial recovery in European currencies, but this did not extend either to the East (where silver and the rupee continued to fall) or to South America. In fact, the appreciation of gold continued till the middle of the year with only slightly diminished rapidity, and the European recovery was due partly to the fact that the temporary credit stringency incidental to the financing of the American crops in November, 1920, had been specially felt by the European importers, but still more to the deflationary measures undertaken by England and her European neighbours. If deflation had at first been less rapid in England, that was because the preceding inflation had been more intense than in America. The exchange gradually rose from 3·34½ in November, 1920, to 4·00 in May, 1921. It was thus as high as when the deflation had begun twelve months before. The currencies of the other Entente Powers in Europe and of the ex-neutrals were similarly restored (though Spain and Norway lagged behind). On the other hand, the collapsed currencies of Central and Eastern Europe, though most of them were above the worst quotations of 1920, were far below the maxima of that year. If they had succeeded in staying the progress of inflation for a time, they were yet far from being able to follow their western neighbours in the policy of deflation.

In May came the first relaxation of the deterrent rediscount rate of 7 per cent., which had been in operation in America for nearly a year. The reduction was only to 6½ per cent., though the deflation might quite safely have been left long before to continue by its own momentum (cf. p. 153). To keep up the rate of rediscount, when prices were tumbling, and the profits of trade had become a negative quantity, was to put on the brake when going uphill. And even then the stress was not over. The universal collapse of values in the United States, though it had not culminated in a crisis of the old type, had left behind it a legacy of embarrassments. Advances to traders, who could not liquidate, were frozen up, and banking difficulties supervened, which came to a head in May, 1921. The fall in prices was almost over, but there was another convulsive stringency, not unlike those of February and November, 1920, and a general fall of the exchanges.

This time the situation was complicated by the efforts of Germany to effect the first large cash payments of reparations. A milliard of gold marks had to be paid between the beginning of May and the end of August. For a year German finance had been saved from collapse only by the increased appetite for paper money and Treasury bills, manifested by the public in consequence of the recovery after the currency crisis of February, 1920. The great tax reforms of 1920 were beginning to bear fruit, but even so the balancing of the ordinary budget was not fully or certainly accomplished, and real resources in the hands of the Government for reparation payments were practically *nil*. A small reserve of foreign currencies that had been accumulated by the Reichsbank was swept into the net, and for the rest it was a case either of offering freshly issued paper money in the exchange market, or of raising short credits in foreign currencies to postpone the evil day for a few months.

The inevitable result was a renewed collapse of the mark, which, by the end of 1921, brought it far below the lowest level of 1920, and which ended the period of repose enjoyed by the collapsed currencies since the spring of that year. For credit conditions throughout Eastern Europe were intimately connected with those of Germany. Even Western Europe was not immune, for French, Belgian, and Italian currencies were sensitive to anything which affected their prospects of recovering reparations.

Down to the middle of 1921 the currencies of Europe had, on the whole, moved together, though some had depreciated far more than others. At that stage a more definite division into two groups began to appear. The stronger currencies, those of England and the countries which had been neutrals in the war, were within sight of parity, and policy aimed at restoring them to it. The weaker currencies, those of the Continental belligerents, were too far gone to hope for restoration to parity; for them devaluation was becoming inevitable. It will be best to trace the course of events in the two groups separately. Logically, the weak currencies come first; their history is a sequel to that of war finance, while that of the strong currencies joins on rather to the future.

Russia, ever since 1917, had stood apart from the rest of Europe. By 1921 she had already set a new standard of what was possible in the direction of currency depreciation. Soon after the Communist Revolution in November, 1917, the foreign exchange market had ceased to function. But the depreciation could still be measured by the price level which, in the middle of 1918, was 100 times that of 1913.[1] Such a collapse was reminiscent of the final stages of the Continental currency or the assignats.

At that time the Soviet leaders were looking forward to an economic system without money. Whereas the Jacobins had clung to the assignats and striven to maintain their value and their currency, the Bolsheviks felt no scruple in discrediting the Soviet notes by unrestricted over-issues. When they swept away the rentier class and the credit system associated with capitalism, the economic relations which depend upon a trustworthy currency ceased to exist. From the point of view of the use of money, they were living from day to day.

In 1921 there came a reaction. The so-called New Economic Policy permitted the reinstatement of private capitalism and profit-making in certain forms. It is doubtful whether in any case the complete elimination of money would have been possible. Even the current exchange of labour for products is best effected by means of a money of account and a medium of payment. It was decided to abandon the ideal of a non-monetary economic system.

But what a state the currency had reached! In the summer of 1921 the note issue reached three billions (3,000,000,000,000) and the price level was about 80,000 times that of 1913. The work of discredit had been done only too well.

An ingenious remedy was found. A new money of account was introduced, but with no fixed relation to the money of legal tender.

This was the " goods rouble," the equivalent in purchasing power of a rouble of 1913. At the beginning of every month the equivalent of the goods rouble in Soviet notes was to be announced on the basis of the price index, and all obligations in goods roubles would be payable in Soviet notes at that ratio.[1] The ratio for November, 1921, the first month of the new system, was 60,000 to 1, though as a matter of fact the price index on the 1st November was 95,500 to 1.

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[1] These statistics of the price level, the note issue, etc., are taken from Professor Katzenellenbaum's *Russian Currency and Banking*, 1914-24.

The official ratio made big jumps each month, but lagged far behind the true price level. In March, 1922, the ratio announced was 200,000, while the price index had reached 1,140,000 to 1. If the currency depreciated at this rate monthly determinations of the goods rouble were not nearly frequent enough. The function of fixing the rate was entrusted to the newly-founded State Bank, which announced it several times a month.

But this ingenious solution was not found really practicable. It had been hoped to fix the ratio daily, but this was quite impossible. And when people began to quote prices in goods roubles, what was to become of the price index ?

The next step was the issue of notes by the State Bank in November, 1922. The notes were ostensibly based on gold value ; they were denominated in *Tchervontzi* of ten gold roubles. But they were not convertible into gold or into any equivalent of gold. By this time there was in being a certain semblance of a foreign exchange market. Quotations existed for dollars and pounds in Soviet roubles. The State Bank adopted the practice of buying back its notes with Soviet roubles at rates based on these quotations.[2] Like the goods rouble, the *tchervonetz* note was simply the equivalent of a varying amount of Soviet roubles, so chosen as to keep the value of the unit, as nearly as might be, stable.

The Soviet rouble remained the principal medium of payment. To avoid the cumbersome strings of ciphers, a new rouble of 1922 was introduced, equal to 10,000 of the old roubles, and then a rouble of 1923, equal to 100 roubles of 1922. This was merely a change of nomenclature. At last, in 1924, the series of Soviet roubles came to an end. The State Bank notes became the sole currency. The roubles of

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[1] See Professor L. N. Yurovsky's *Currency Problems and Policy of the Soviet Union*, pp. 71-2.

[2] *Ibid.*, pp. 103-4.

1923 were withdrawn in March, 1924, at the rate of 50,000 to one gold rouble. Thus, the final devaluation was in the ratio of one to 50 milliards.

Since then the *tchervonetz* has been regulated by relation to the foreign exchange quotations. But the market in pounds and dollars is subject to rigid official regulation, and the tendency of prices to rise shows that the stabilisation is by no means perfect. These events in Russia were absolutely detached from the monetary history of the rest of Europe. Nevertheless, they supplied an ominous precedent for what might happen. The initiation of the New Economic Policy in Russia was contemporaneous with the renewed collapse of the German mark under the sudden pressure of the reparation milliard demanded in May, 1921. At that date the mark was worth about $\frac{1}{15}$ of gold parity. Some other currencies were much more depreciated, Hungarian crowns to $\frac{1}{40}$, Austrian to $\frac{1}{80}$, Polish marks to $\frac{1}{200}$ of gold parity. Only the last-named had passed beyond the stage of depreciation reached by the rouble in 1918.

All the currencies of Central and Eastern Europe had been in a state of quiescence in the opening months of 1921. The sudden weakness of the German mark started them all on a renewed decline. In 1922 and 1923 Germany continued to be the storm centre. Depreciation there had already become so rapid that the yield of direct taxes evaporated in the interval before collection. Thus truncated, revenue fell far short of expenditure. Long-term loans denominated in marks would have been laughed out of the market; loans abroad in foreign currencies were unobtainable. The deficit was met by sales of Treasury bills. But the public had lost confidence and would not take them; the bills had to be discounted by the Reichsbank. In other words, the deficit was met by the printing of paper money; there was no other resource.

Upon this state of financial prostration supervened the ever-insistent demand for more reparation payments. The schedule of payments of 1921 had to be amended, but still a steady stream of provisional payments was demanded in the early part of 1922. In July, 1922, Germany asked for a moratorium, and was refused, though six-months' bills were accepted for the payments then pending. The mark, which was worth half a cent in January, 1922, had fallen to $\frac{1}{100}$ of a cent a year later, when the French and Belgians occupied the Ruhr coal-fields.

The occupation for the moment freed the German budget from the burden of reparations (except for a time the payments to the United Kingdom under the Reparations Recovery Act), and a fleeting attempt was made to support the exchange at $48 to a million marks ($\frac{1}{5000}$ of par). No adequate restraint was placed on the creation of credit by trade borrowing, and meanwhile the Government was assuming heavy liabilities to maintain the "passive resistance" of the Ruhr industrialists. In April the attempt at stabilisation broke down.

For the next seven months there proceeded a headlong depreciation, surpassing anything recorded in the history of currency. Stores of specie, such as appeared in France when the assignats collapsed, were nowhere within reach. The only way of escape from a currency which could not be trusted to retain its value for an hour was by the creation of a new money of account with no material counterpart, a parallel to the "goods rouble." "Emergency money" began to be issued in the early autumn, denominated in "gold marks." The Federal Government issued it in the form of gold value Treasury bills (reminiscent of the Exchequer bills issued by Montagu to meet the scarcity of currency in 1696); municipalities and the railways and some other authorities issued notes (infringing the monopoly of the Reichsbank). Thus the gold mark gained a footing as a credit unit, at a time when gold coin was nowhere to be seen. The gold market (in the form of the market for American dollars) was, however, very much alive.

Dexterous use was made of this development. A new bank of issue was constituted, the Rentenbank, and its notes, expressed in "renten marks," were made convertible into interest-bearing gold bonds. The gold bonds, in turn, were secured on a forced loan from industry and agriculture.

The plan (though freely denounced at the time as make-believe) was theoretically defensible. And in practice it worked. The source of danger was that the Government had to be supplied with funds for a transitional period of two or three months till it was possible to put the taxes on a gold basis; it had, in fact, to be financed with the new paper money. But the existence of an independent guarantee in the form of the forced loan maintained public confidence, and the new paper money retained its value despite this final resort to inflation.

The appearance of a stable money of account finished off the paper mark. When liabilities were no longer expressed in paper marks, the last inducement to hold balances in paper marks vanished. By the middle of November the paper mark had fallen to one-billionth (i.e. a million millionth) of its par gold value, and that was the ratio at which it was replaced by rentenmarks in the months that followed. The ratio was thus twenty times as great as that recorded in Russia, and the collapse had been far more rapid. In April, 1923, the mark had been at about the stage of depreciation reached by the rouble in the spring of 1920; it took four years to finish off the rouble and only seven months to finish off the mark.

The collapse of the mark was caused by the reparation payments. That does not mean that those payments strained Germany's exporting power. Mr. J. M. Keynes argued forcibly and convincingly in his *Economic Consequences of the Peace* that the reparation liability then contemplated transcended Germany's capacity of creating an export surplus, and since he wrote his book in the autumn of 1919 this argument has commanded ever wider assent.

But to adduce the actual collapse of the mark as evidence confirmatory of the argument is to misconceive the causes of the collapse. Germany did not comply with the primary condition that she should *budget* for her liabilities. She failed even to raise revenue to cover the annual internal expenses of Government. Mr. Keynes was arguing against an obligation which he estimated at £480,000,000 a year. The actual payments made on account of reparations in 1921, 1922, and 1923 were far less, and probably did not exceed the export balance which Germany was capable of creating.

The collapse of the mark was due simply to inflation. The Government had no resources from which to make the payments due, and from time to time it plunged into the foreign exchange market to offer freshly printed paper money for foreign currencies on any terms. No doubt the fact that the paper money was created to meet an external obligation led to an exaggerated depreciation of the mark in relation to the foreign exchange market and foreign trade products; but the inflation did not differ materially from one caused in any other way.

The currencies which started to depreciate in sympathy with the mark in 1921 had met with diverse fortunes in the two years which followed. The first country to free itself from German monetary influence was Czechoslovakia. Czechoslovakia included the most prosperous and industrially strongest portions of the old Austro-Hungarian Empire. Early in 1919 the newly created republic took steps to separate its currency from those of other countries which were using the Austro-Hungarian bank notes. All notes within its territory were required to be impressed with a distinctive official stamp. A period of a few days was allowed for people to present their money for stamping, and the frontier was closed meanwhile in order to limit the stamping to the notes already in the country.[1] Thereafter, only the stamped notes were legal tender, and they constituted a separate Czechoslovak currency (to be replaced, in due course, by a new issue). The stamping measure was combined with a forced loan, half of all holdings in excess of a certain limit being withheld and bonds being given to the holders instead.

The Czech crown had not been dragged down with the Austrian and Hungarian crowns. In May, 1921, it was at about the same relative level as the German mark. It started falling, but not so fast as the mark. In November, 1921, the crown was worth about one cent, but thereupon there followed a spectacular recovery.

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[1] The same method was adopted at the same time by Jugoslavia, and subsequently by the other Succession States.

Czechoslovakia was favoured by circumstances. She had no war debt, no reparation liability, no devastated area. She had a vigorous Government which had the energy to impose a capital levy. Early in 1922 she was enabled to float loans in London and New York. She had adequate resources to sustain the market for her currency and prevent any further fall. From October, 1921, to May, 1922, the note issue was reduced from 12·3 milliards to 9·7, and the exchange rose from 1 cent to 1·9 cents. Recovery, once started, gained impetus, and in August, 1922, the exchange touched 3·7 cents, although the contraction in the note issue had ceased. Thereafter the crown was successfully stabilised at about 3 cents, but not without the severe depression and unemployment characteristic of a period of falling prices.

In the course of 1922 besides Czechoslovakia, Finland and Latvia, countries free both from war debts and from reparation burdens, succeeded in stabilising their currencies at new gold values. Austria, on the other hand, burdened both with a war debt and with vast but undefined reparation liabilities, was helpless. Her currency began slipping down into the abyss even faster than that of Germany. The complete discredit of the means of payment threatened economic paralysis, starvation, and anarchy. International action was urgently called for. The reparation obligations were deferred by agreement, and the League of Nations stepped in with a scheme of reconstruction. A loan was floated in London, New York, and other centres with an international guarantee, and a representative of the League came to Vienna to supervise the application of the proceeds to the scheme. The currency was successfully stabilised, but only at $\frac{1}{14400}$ of its former gold value. The figure looks respectable alongside the German or Russian ratio of depreciation. But in reality the advantage to a rentier, who formerly had £10,000 a year, of finding himself with 14s. a year rather than nothing is not very substantial.

Rumania, Jugoslavia, Greece, and Bulgaria suffered substantial, but not overwhelming depreciation between May, 1921, and the opening months of 1923, and then gained relative repose. On the other hand, the Hungarian and Polish currencies were suffering rapid and progressive collapse all through 1923, and adopted stabilisation schemes (with the assistance of the League in the case of Hungary) in the course of 1924.

The frightful welter of monetary confusion from which Central and Eastern Europe had been suffering was thus practically over by the end of 1924. Gold had been restored as the standard. Stabilisation was not everywhere secure (Poland relapsed, though not disastrously, in 1925), and in a few countries had not been attempted. But the terrible demoralisation which had destroyed all trust in the standard of value no longer prevailed.

In Western Europe no monetary collapse comparable to those of Germany, Poland, Austria, Hungary, or Russia was seen. In the United Kingdom, and the group of ex-neutral States depreciation was never such as to preclude a reasonable expectation of getting back to the old parity. France, Belgium, and Italy suffered more seriously. All three had to face heavy expenditure on the reconstruction of invaded territory; all three found their financial outlook deeply entangled with the prospect of extracting reparation payments from Germany. To France, in particular, both the debit for reconstruction and the uncertain credit for reparations were on a vast scale. France and Italy also were loaded with gigantic war debts, internal and external. The external debts included very heavy obligations to the British and American Governments, which, so long as they remained unsettled, were a further source of uncertainty.

The fall that occurred in French francs and Italian lire in the year following the withdrawal of support from the exchanges in March, 1919, was the result of budget troubles. The currency was in each case inflated by a huge and growing floating debt. But both France and Italy participated in the recovery and the fall of prices that began in 1920. Drastic additional taxation improved the budget position. Inflation once stayed, internal borrowing became possible.

At the beginning of 1922 France appeared to be in relatively calm water. At 9 cents the franc stood higher than at any time since 1919 (par was 19·295 cents). The floating debt was no longer increasing ; the budget deficit and the cost of reconstruction were being covered by loans on an apparently sound basis.

This satisfactory state of things depended on confidence in the currency, and confidence was balancing on a razor edge. If distrust of the currency recurred, investors would not lend in terms of francs, and the vicious circle of inflation would be set up again.

The deficit on the ordinary budget was still substantial, and in addition there was an enormous separate budget of "Expenses Recoverable under the Peace Treaties." This separate budget was all expenditure and no revenue. Receipts were all in the future, dependent on the solution of the reparations problem. Expenditure included not only the fresh capital outlay on the devastated regions, but the debt charges on past expenditure under that head, and the whole annual cost of war pensions. The very title, "Expenditure Recoverable," advertised the dependence of the French budget on Germany. Public opinion in France could not be expected to understand the intricacies of the reparations problem, but this single fact stood out, and every speculator in francs kept an eager watch on marks.

At the end of 1921 M. Briand's Government had been inclined to take a conciliatory attitude. The schedule of payments was so far modified that Germany was allowed to make interim payments on what appeared to be a manageable scale. But at the beginning of 1922 M. Briand, the advocate of conciliation, was replaced by M. Poincaré, the advocate of compulsion. With the refusal of Germany's request for a moratorium in July, 1922, there began the collapse of the mark, and in January, 1923, came the occupation of the Ruhr coal-fields. The final collapse of the mark that ensued could not fail to affect the franc. The franc had been worth

9 cents in the spring of 1922. By the end of 1923 it had fallen to 5 cents and was still falling. On the 8th of March, 1924, it was quoted at 3½ cents. Almost more ominous than the fall in market quotations was the failure of a loan issued in January, 1924, to raise money for the reconstruction of the devastated regions, only 1·6 milliards being subscribed when 3 milliards were asked for.

It looked as if France would be placed in the position of Mrs. Bardell when she followed Mr. Pickwick into the debtors' prison. M. Poincaré grappled courageously with the situation. A substantial increase was hastily made in taxation. Credits were raised abroad, £4,000,000 in England and $100,000,000 in America, on the security of the gold reserve of the Bank of France. People recovered from their panic. The usual reaction occurred, when they found themselves inconveniently short of currency. In about six weeks the franc had risen to 6½ cents.

With the issue of the report of the Dawes Committee in April, 1924, and its adoption at the London Conference in August, 1924, the reparations question ceased to be a disturbing factor. M. Poincaré was succeeded in June after the elections by M. Herriot and a Government of the Left. Nevertheless, the franc had not yet got into calm water.

The spasmodic rise of the franc in April, 1924, like the fall which preceded it, had been overdone. The Bank of France was unable to control the rise because it could not increase the supply of francs without exceeding the maximum limit of 41 milliards imposed by statute upon its note issue. Some reaction followed, but not at first on a serious scale.

Even M. Poincaré's tax reforms had not really balanced the budget. A loan was issued in October to meet the deficit. It was a modest success, but to raise about 5 milliards the Government had to issue it on terms which yielded about 8½ per cent. to the investor.

And the deficit was no longer the most urgent matter. The floating debt exceeded 90 milliards. The regular renewal of the 50 milliards or more of *bons de la défense nationale* depended on confidence. In the summer and autumn of

1925 a series of bonds, exceeding in all 20 milliards, that had been issued by M. Poincaré's Government, would mature. Unless some other provision could be made for them, the whole might have to be added to the already excessive floating debt.

Here was a situation reproducing some of the anxieties of war finance. It came to a head even before the first of the maturities. In May, 1925, the Government had to confess that the statutory limits on the advances from the Bank of France to the Government and on the Bank's note-issue had been transgressed, and that the irregularity had been concealed in the Bank's published statements. M. Herriot proposed to restore the financial situation by means of a forced loan, but he was defeated in the Senate. There was no way by which the majority of the Chamber could prevail over the Senate. For the next fourteen months unstable Governments, with a fleeting succession of finance ministers, failed to restore the country's finances. By July, 1926, the franc had fallen to 2½ cents (on one day almost to 2 cents). At last the collapse was arrested by the formation of a Coalition Government under M. Poincaré, but including both M. Briand and M. Herriot. It was at last possible for Senate, Chamber, and Government all to work in harmony. A Committee of experts, appointed in May, 1926, by M. Raoul Péret, had issued a report in July recommending a programme of reform measures. Drastic new taxation was imposed, sufficient not merely to balance the budget but to provide a big sinking fund. The Bank of France was empowered to buy gold and foreign exchange, and if necessary to exceed its maximum note-issue for the purpose. (This would enable the Bank to prevent an inconveniently sharp appreciation of the franc, though it has not up to the present been necessary to exceed the maximum issue, which stands at 58½ milliards.)

By December, 1926, it was possible to institute a *de facto* stabilisation of the franc at just under 4 cents.

Meanwhile the Belgian franc had had an equally troubled history. Till 1925 it had been tied closely to the French franc. Belgium was interested in the prospect of reparations, and her currency was subject to the same political influences from this quarter as that of France. But the intimacy of the connection between the two francs was mainly due to the close association of the French and Belgian banking systems. The Belgian franc was occasionally worth a little more, but usually a little less than the French franc; on the whole, they moved up and down together. In the summer of 1925 the French franc dragged down the Belgian, although Belgium had no direct concern in the French budget difficulties. An attempt was made in the autumn to emancipate the Belgian franc from French influence; it was stabilised at a level of 4½ cents. This was a purely administrative measure; there was no legal obligation to convert notes at that rate.

After a few months of stabilisation various adverse tendencies appeared. Neither the bankers nor the industrialists liked the maintenance of their own currency above the French. Stabilisation (at a time when gold prices throughout the world were falling) involved a greater financial effort, and greater disadvantages to producers than had been bargained for. Difficulties were found both in getting bankers at home to renew the floating debt and in getting bankers abroad to provide credits to support the currency on sufficiently liberal terms. In March, 1926, the stabilisation plan was abandoned, and the Belgian franc was once more seen moving in sympathy with the French. It shared the crisis of July, 1926 (falling to 2 cents). A new stabilisation scheme was initiated in October at a rate of about 2¾ cents. This scheme has been established by statute and is intended to be definitive.

Italian currency depreciated up to 1926. Recovery followed, and the Government aimed for a time at a progressive appreciation. But in face of growing depression this policy made way for a *de facto* stabilisation at 89 to 90 lire to £1.

In England once the torrent of inflation had been stemmed in 1920, the chief preoccupation was the restoration of the pound to its par value of 113 grains of fine gold, or $\$4{\cdot}86\frac{21}{32}$. Up to July, 1921, when the fall of prices in America may be said to have ceased, there was no real progress towards parity. The exchange was 3·63; it was above the panic quotations of February and November, 1920, but it was below the level reached in the spring of that year. The price index had fallen from 325·5 in May, 1920, to 194·1 in July, 1921. The wealth value of the pound had risen by 68 per cent., while that of the dollar had risen by 75 per cent. The pound had actually lost ground to the dollar.

In both countries the fall of prices had put an almost unbearable strain on trade and industry. In America the index of manufacturing production fell from 90 for the year ending June, 1920, to 66 in 1921. The number of unemployed was estimated at 4,000,000. In Great Britain the number of unemployed, after the effects of the coal strike (April-June) had passed off, was 1,500,000, and was increasing. What was the next step in credit policy to be? The American dollar was on a gold basis. The gold reserves had been heavily drawn upon in 1920; the margin held by the Federal Reserve Banks in excess of their statutory reserve proportions had been reduced at one time to $200,000,000, and in December, 1920, stood at $332,000,000. In 1921 the margin rapidly increased, and in June reached $1,000,000,000. No other country in the world remained on the gold standard. The United States was the sole buyer of gold for monetary purposes, and had to absorb all the surplus supplies. Further reductions brought the rediscount rate down to 4½ per cent. in November, 1921. In 1922 trade began to revive, and prices to rise.

In England, on the other hand, the currency was still at a discount. Bank rate was reduced, by the same steps at first as the New York rediscount rate; but later London hung back and finished the year at 5 per cent. This was still a very high rate at a time of depression, and there could be no influx of gold to make Bank rate ineffective. Prices continued falling. By January, 1922, the index was 164, a fall of 15½ per cent. since July.

Thus for six months the wealth-value of the pound had continued rising, while that of the dollar had remained stationary. The result was recorded in the exchange, which had risen from 3·63 in July, 1921, to 4·22 in January, 1922.

Here, at last, was real progress. As soon as the dollar stood still, the gap which separated sterling from parity had been reduced in six months from 25 per cent. to 14 per cent. But at what cost! The number of unemployed had risen to 2,000,000.

Prices were still falling and the exchange was still rising in February, 1922, when Bank rate was reduced to 4½ per cent. Successive reductions brought it to 3 per cent. in June. The New York rate was reduced in the same month to 4 per cent. Recovery had made far greater progress in America than in England. American prices were rising; English prices were stationary. A rate of 4 per cent. had less deterrent effect in the United States than 3 per cent. in England.

In March, 1923, the American price index had risen to 159 and the exchange to 4·70. Up to that point it had been possible to maintain a régime of cheap money in England without any apparent sacrifice of the desired objective of gold parity. Trade was steadily recovering. The number of unemployed had fallen to 1,300,000. The exchange was within 3½ per cent. of par.

This promising situation was disturbed by a change of policy in America.[1] Prices there had risen 15 per cent. above the low level of 138 in January, 1922. Unemployment had vanished. On all sides was to be seen productive activity; here and there were symptoms of a speculative outburst. Ostensibly the Federal Reserve Banks were working under the guidance of the reserve proportions prescribed by the Federal Reserve Act of 1913. The signal for a contraction of credit was to be given by a shortage of gold, that for an expansion by surplusage. The credit expansion of 1922 did not stop the accumulation of gold. The margin of surplus gold had risen to $1500,000,000. The way was clear to another tremendous inflation.

The experience of 1919 and 1920 had shown that adherence to the gold standard was by itself no safeguard against such a danger, and did nothing to mitigate the ill effects of the inflation which it allowed to occur. The Federal Reserve Banks were fully alive to the position; they deliberately threw aside the statutory principle of reserve proportions, and adopted in its place a policy of *stabilising* credit. Their aim was to avoid inflation and deflation alike; without being rigidly tied to a fixed price index, this policy approximated closely to a stabilisation of the wealth-value of the currency unit.

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[1] For a fuller account and criticism of credit policy in England and America from 1922 to 1926, see *Monetary Reconstruction*, pp. 139-75.

The first step was to stop the credit expansion that was in full swing at the beginning of 1923. The rediscount rate was put up in February to 4½ per cent. The Federal Reserve Banks' holdings of securities bought in the open market were reduced. Credit responded almost too readily to this treatment. Prices soon began to fall. In the early months of 1924 the Federal Reserve Banks found that the contraction had gone further than they intended. There was a serious decline of production, and some recrudescence of unemployment. By June the price index was 144·6 or 9 per cent. below that of March, 1923. They had repeated on a more moderate scale the mistake of keeping on a deterrent rediscount rate too long after it had done its work.

The credit contraction in America put an end in England to the happy combination of reviving trade with an improving exchange. One or other of these advantages had to be sacrificed. Any departure from the régime of low discount rates would interrupt the trade revival. Despite the progress made since the beginning of 1922, the depression was still very severe. In America the depression of 1921 had been cured by a definite expansion of credit and a substantial *rise* of prices. Switzerland was in the midst of a similar experience. Having reached gold parity in December, 1921, at the cost of intense depression and unemployment, she deliberately reduced her Bank rate to 3 per cent. and allowed the exchange to lapse in the course of 1922. By the middle of 1923 the Swiss franc was at a discount of 9 per cent., but unemployment had ceased to be serious. The Swiss Bank rate was then advanced to 4 per cent.

In England there had been no rise of prices since the collapse of 1921, and the progress of recovery had been much slower than in the United States or Switzerland. In March, 1923, the exchange began to fall; in June it fell below 4·60; in July Bank rate was put up to 4 per cent.

In the following months, however, Bank rate was not made *effective*. The market rate of discount dropped almost to 3 per cent. In the autumn political influences (particularly the prospect of a Labour Government) caused a speculative drop in the exchange, with inflationary reactions. Still the market rate of discount was allowed to sag. The exchange fell at one time to 4·20. The price index rose in February, 1924, to 167, or 6 per cent. above that of October, 1923. Unemployment, after an interval of stagnation, began to decrease again. In June, 1924, the number of unemployed was 1,000,000, or 220,000 less than twelve months before.

On the whole, despite the rise of Bank rate in 1923, the exchange had been sacrificed to the trade revival, but not so decisively as to come within sight of an elimination of unemployment, such as had been attained in the United States or Switzerland. The number of unemployed though halved since January, 1922, was still appallingly great.

In 1924, as we have seen, the Federal Reserve Banks found that their contraction of credit had gone too far. Successive reductions in May, June, and August brought the New York rediscount rate down to 3 per cent. The banks increased their holdings of securities. Credit expanded and prices rose.

This reversion to the favourable conditions of 1922 put the choice of credit policies before London in a new form. In 1923 the choice had been between trade depression and exchange depreciation. In 1924 it was between trade revival and exchange improvement. If credit were allowed to expand *pari passu* with credit in America, the exchange would remain at its existing figure, but it would be possible to get rid of unemployment. If credit were so far restricted as to keep the price level fixed, the exchange would rise, but the escape from unemployment would be delayed. In July, 1924, the first step, though not an ostentatious one, was taken towards credit restriction. Bank rate had remained at 4 per cent. for a year, but had not been effective. Pressure was now applied, and drove the market rate up to 3⅝ or 3¾ per cent. Slight as the change was, it was enough to prevent the price level in England rising concurrently with that in the United States. The exchange rose. The rise was soon helped by speculative anticipations of a return to par.

In January, 1925, the exchange had reached 4·78. The American price index was 160. At the end of February the New York rediscount rate was raised from 3 to 3½ per cent. Even so it was lower than at any time during the credit expansion of 1922-23, and it was ½ per cent. below the Bank of England's rate.

Thereupon, Bank rate was put up to 5 per cent. That credit restriction which had been dreaded and withheld ever since 1921 was now imposed. The unemployment situation had ceased to improve since June, 1924 ; it began seriously to deteriorate.

It might be supposed that this change of credit policy would hasten the progress of the pound sterling towards par and facilitate the resumption of the gold standard. But as it turned out, that was not so. The gold standard was in fact restored on the 27th April, 1925. The Chancellor of the Exchequer announced that the Bank of England would sell gold for export without restriction at the coinage price of £3 17s. 10½d. a standard ounce. Early in May the Gold Standard Act was passed.

The re-establishment of the gold standard necessarily brought the exchange within a fraction of parity. But equilibrium was not attained in the balance of payments. A weak point was revealed in the high Bank rate policy. A Bank rate 1½ per cent. above the New York rediscount rate afforded an inducement to American banks to bring surplus funds to London for temporary investment. So long as this process was at work, the exchange was maintained at a level favourable to London. But when Bank rate was reduced, the balances began to flow back again, and heavy withdrawals of gold from London followed. This attraction of liquid funds from New York was no real advantage to the exchange; rather it was an embarrassment (see p. 145).

Any permanent gain could only be derived from the high Bank rate through a contraction of credit and an enhancement of the wealth value of the pound. That, indeed, occurred. The price index fell from 171·1 in January, 1925, to 143·6 in April, 1926, and (after the coal dispute) to 140·6 in March, 1927. But a great part of the effect was nullified by a fall in the American price level. The index fell from 161·0 in March, 1925, to 145·3 in March, 1927. The value of the pound was being forced up, but the objective aimed at was receding.

The wealth-value of gold in world markets was rising. In 1923-24 it had risen owing to the credit restriction in America. In 1925-27 there was no such restriction there. The New York rediscount rate never rose above 4 per cent., and for a great part of the time stood at 3½. There was no marked reduction in the open market assets of the Federal Reserve Banks. The credit restriction came from London. It illustrated once again the power of the Bank of England rate as an international influence. When Bank rate goes up, the effect is felt by every producer who sells to British merchants or to merchants financed directly or indirectly through the London money market. American producers are not immune. Many American products, including most of the staple crops, are partially dependent on world markets, and their prices are governed by world prices. A curtailment of effective demand in European markets reacts on American exporters and through them on American markets generally.

There has been a conflict between the cheap money policy of New York and the dear money policy of London, and the latter has prevailed owing to the international potency of the London discount market. The result has been a departure from the stabilisation policy of the Federal Reserve Banks. The departure has been less marked than in 1924. The fall of prices, after allowance has been made for non-monetary factors such as the abundant cotton crop, has been less. The falling off of production has been slight. The injurious effects have not been serious, because the credit restriction has only reached the United States in a diluted form.

In England and Europe the effects have been much more conspicuous. The net progress in England towards the elimination of unemployment since the 4 per cent. Bank rate was made effective in July, 1924, has been *nil*.

CHAPTER XXIII.

CONCLUSION.

WHAT I have called the classical theory of currency starts with the postulate that any two things exchanged must both have *value*. If goods or services are sold for money, the money must have value, as well as the goods or services. If they are sold for credit, the credit must have value. A debt or credit is the debtor's obligation to pay, and, if the debt or credit is to have value, that which he is obliged to pay must have value. Credits can be used as a substitute for money, because and only because they give a title to money. The right to receive money on demand is for many purposes equivalent to money. A piece of paper which purports to confer this right, but does not in fact do so, has in reality no value; it is a promise to pay which is not kept. Paper money which is not convertible into coin is a sham, a fraud. He who sells goods for paper money sells something for nothing; likewise he who sells them for a credit payable only in paper money. Coin only differs from bullion in that its weight and fineness are certified. If it does not contain the prescribed amount of fine metal, the certificate is an imposture.

This severe and uncompromising doctrine has owed its success rather to its practical utility than to its theoretical perfection. It has grown up out of the political contests which have raged from time to time about currency questions. Attacked and defended by a thousand politicians and pamphleteers, it has held the field as the one theory which provides an intelligible, self-consistent, workable system. The economists, at any rate for the past half-century, have not paid such unreserved homage to it as the practical men. They have seen that the precious metals themselves cannot provide an invariable standard of value, and they have speculated on ideal currency systems based on index numbers of prices and similar devices. But on the whole for most people sound currency still means, as it has long meant, a metallic currency. In it they see the only bulwark against inflationism, that attractive but insidious financial vice.

But to recommend a dogma on account not of its inherent validity but of its good practical consequences is dangerous. When people discover its theoretical weaknesses they may not only reject the dogma but neglect the practical consequences. It is best to know the weaknesses of a friend, otherwise friendship is precarious, and may break under the strain of some unpleasant discovery.

Inflation means a too free creation of credit. The classical theory of currency teaches us to guard against this by tying down credit rigidly to a metallic basis. It rightly holds paper money and debased or over-valued metallic money to be dangerous expedients. But in treating them not merely as dangerous but as the negation of truth it goes too far.

One consequence is that the true nature of a money of account has been obscured. If a credit has no other meaning than an obligation to pay so much gold, there is no room for the conception of a unit for the measurement of debts as distinguished from a unit for the measurement of gold. So long as debts are in fact payable in gold the neglect of the distinction is innocuous. But it is just when the monetary system becomes deranged, and debts are no longer payable in gold, that currency theories, which may usually be left to the care of economists, gain practical and political importance.

In the House of Commons debates of 1811 on the Report of the Bullion Committee, the supporters of the Committee mercilessly ridiculed their opponents for suggesting that the monetary unit could be anything except gold or silver. Canning, in what was perhaps the most brilliant speech of the whole long debate (8th May, 1811), taunted Castlereagh with defining the standard to be " a sense of value in reference to commodities." The Bullion Committee had been accused of putting forward abstract theories. " The admonition to beware of abstract theories," said Canning, " comes from whom ? From the inventors and champions of ' abstract currency '—from those who, after exhausting every attempt to find an earthly substitute for the legal and ancient standard of our money, have divested the pound sterling of all the properties of matter, and pursued it under the name of ' ideal unit ' into the regions of non-entity and nonsense. I contend," he said, " that a certain specified weight of gold or silver, of a certain fineness, is the only definition of a pound sterling which an Englishman, desirous of conforming to the laws of his country, is bound to regard or understand."

The debaters on the other side had really no intelligible theory to put in opposition to this.[1] They were only concerned to explain away the fact that gold bullion was worth some 25 per cent. more than the coinage price. To press the arguments they used to their logical conclusion would only have been to make them look less plausible and more dangerous. Thus the argumentative battle went by default in favour of the classical theory, and in 1819, when the country was relieved from the overpowering necessities of war finance, the fruits of victory were quietly reaped by the stalwarts of the Bullion Committee. Inflationism found a last refuge in the eccentric radicalism of Birmingham, and it was only against the unimportant opposition of such men as Muntz and Attwood that Peel was speaking when, on introducing the Bank Charter Bill of 1844, he put the question : " What is the real nature and character of the measure of value in this country ? "

" What is the significance," he said, " of that word, a ' Pound,' with which we are all familiar ? What is the engagement to pay a ' Pound ? ' Unless we are agreed as to the answer to these questions, it is in vain we attempt to legislate on the subject. If a ' Pound ' is a mere visionary abstraction, a something which does not exist either in law or in practice, in that case one class of measures relating to paper currency may be adopted; but if the word 'Pound,' the common denomination of value, signifies something more than a mere fiction—if a 'Pound' means a quantity of the precious metals of certain weight and certain fineness—if that be the definition of a 'Pound,' in that case another class of measures relating to paper currency will be requisite. Now the whole foundation of the proposal I am about to make rests upon the assumption that according to practice, according to law, according to the ancient monetary policy of this country, that which is implied by the word 'Pound' is a certain definite quantity of gold, with a mark upon it to determine its weight and fineness, and that the engagement to pay a Pound means nothing else than the promise to pay to the holder, when he demands it, that definite quantity of gold."

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[1] This is not true without exception of the pamphleteers. Mr. Thomas Smith, an accountant, who gave evidence before the Committee of 1819 and wrote two pamphlets, quite appreciated the conception of a Money of Account, though in other respects he contributed his full share to the general output of nonsense which characterised this in common with most other currency controversies.

The general acceptance in this country then and afterwards of this doctrine has contributed greatly to our freedom from currency troubles, and to our pre-eminent international credit position. But undoubtedly Peel and the supporters of the classical theory missed a part of the truth. They missed the conception of a money of account as something distinct from the legal tender money.

To arrive at that conception, it is necessary to understand that an undischarged debt due from a solvent debtor is, from the standpoint of the creditor, purchasing power. There being a demand for purchasing power *as such*, purchasing power commands a value like any other right over wealth. The money of account provides the unit in which debts (including bank credits) are legally expressed, and the same unit, being used to express prices, provides a common denominator for the measurement of the relative values of purchasing power on the one hand and commodities or services on the other. So long as the quantity of purchasing power (which we have called the unspent margin) is not unduly increased or decreased, prices are not disturbed, and the value of the monetary unit of account remains steady. But owing to the natural instability of credit this cannot be relied on. Therefore the expedient has been adopted of *fixing the price of one commodity*.

Gold is given its coinage price, and to make this price a reality, it is decreed that every debtor may be required, if his creditor so desires, to pay in gold at that price. The result is that the dealers in debts have to keep a part of their assets in gold, in order to be in a position to comply with their legal obligations. But this plan of making debts payable in gold is merely a device for keeping the variations in the value of the monetary unit within bounds.

The value of one commodity in terms of another is regulated by the conditions of supply and demand, and so long as those conditions do not vary greatly, one commodity is as good a standard of value as another. In practice conditions of both supply and demand are apt to vary a good deal, and the precious metals, being less subject to wide and rapid fluctuations than almost any other commodities, as well as being well adapted for coinage, have been generally selected as the basis of the monetary system. But convenience alone has been the ground of this choice. To say that the monetary unit of account has no *meaning* but the precise weight of gold or silver which it represents at the coinage price is flagrantly untrue. When Castlereagh defined the pound sterling to be "a sense of value in reference to commodities," he can have had no very clear idea of the nature of a money of account or of its relation to credit. But to reply, as Canning did, that "a certain specified weight of gold or silver of a certain fineness" is the only definition that an Englishman need regard or understand, is completely to misconceive the true theory of the subject. At that very moment debts and prices were actually reckoned in a pound sterling which Canning and his friends clearly proved to be depreciated 20 per cent. They may have reasoned quite rightly that £1 *ought* to have meant $113\frac{1}{623}$ grains of pure gold. In point of fact it *did* mean, in terms of gold, about 91 grains. This was only possible because the law which defined £1 in terms of gold or silver was in abeyance. It remained merely the unit for the calculation of debts. Its value, no longer bound to any specified commodity, was determined by the exceedingly complex process analysed in Chapter IV. Peel, too, when he declared that a pound meant a certain definite quantity of gold with a mark upon it to determine its weight and fineness, claimed that this was so "according to practice, according to law, according to the ancient monetary policy of this country." The argument was not that no other monetary system was possible, but that, as this monetary system actually existed, an engagement to pay a pound must be interpreted in the light of it, and to discharge it otherwise than by the payment of the stipulated quantity of gold would be a breach of faith. This is the real foundation of the classical theory. To secure a sound currency against all attacks, it is not enough merely to prove that it is invariably expedient to maintain a metallic standard; a departure from that standard must be shown to be actually dishonest; the system must be securely founded on a categorical imperative.

But this categorical imperative did not necessarily preclude any change of standard whatever. Just as loyalty to the *de facto* monarch, even though a usurper, was recognised as innocent by the law of treason, so with lapse of time a monetary standard, in its origin an immoral debasement, might become entitled to recognition. Queen Elizabeth, whose boast, *moneta in justum valorem redacta*, Peel held up to approbation in the debates of 1819, did not go back to the standard that existed in 1543, but coined a Troy pound into 60s. instead of 45s. And the coinage price of silver, 62s. to the pound, which survived till 1816, was the result of a further debasement by Elizabeth herself, which, though slight, did not differ in principle from the mediæval debasements. The classical theory of currency could not but condemn any debasement, but a change of standard from silver to gold or *vice versa* might be perfectly legitimate. There was nothing contrary to the categorical imperative in the change from a silver to a gold standard in Germany in 1873. A promise to pay 930 thalers meant before the change 15½ kilogrammes of silver, and after the change a kilogramme of gold. But there was no breach of faith, because a kilogramme of gold was equal in value to 15½ kilogrammes of silver. If Mr. Bryan and the silver party had won the presidential election in the United

States in 1896, a debt of $100 would have become payable in 41,250 grains of silver (nine-tenths fine) instead of 2580 grains of gold. This would have been a reversion to the pristine standard of the country, but it would none the less have been unjust to creditors, because the silver was at that time worth no more than half as much as the gold.

But to admit value as the test is really to abandon the categorical imperative. If a bullion dealer contracts to deliver 10,000 ozs. of gold, it is not a fulfilment of the contract to deliver an exactly equivalent value of silver. If a purchaser contracts to pay money, neither party to the agreement considers in what medium the debt will be payable. The medium of payment and consequently the value of the debt will be settled by the law of the land. The medium of payment in fact is not part of the contract. And this is true as much of a promise to pay as of an obligation to pay. If payment were desired in any particular medium, this would be expressly stipulated (as it often is in countries where the currency system does not command confidence).

Along with the categorical imperative, the moral objections of the classical school to inconvertible paper money fall to the ground. There remain the objections on the score of expediency. These arise chiefly from the risk of abuse. *If* a paper issue is so regulated that the foreign exchanges are kept near par, and that the purchasing power of the monetary unit in terms of commodities does not vary unduly, then the advantages of a sound currency system have been obtained. But unless there is some generally recognised international standard of value these conditions may be unattainable and may not even be consistent with one another. Till 1873 the international standard was provided by gold and silver, linked together by the bimetallic system. Since the breakdown of bimetallism it has been provided by gold. The test of every paper currency has therefore been parity with the precious metals. If the metallic standard is supported either by a metallic circulation or by a substantial metallic reserve, early warning of inflation is given by withdrawals for export. The actual depreciation of the monetary unit does not begin till the metallic currency and reserve are exhausted. But to gain the full advantage of this respite there must be a real reluctance to depart from the metallic standard. Primitive man clung to his religious rites for fear he should neglect the progress of the seasons and the annual round of agricultural operations. The currency experts of the nineteenth century, with similar prudence, sanctified metallic money with an almost religious taboo.

But it is hardly necessary to insist at this stage that metallic money is by no means a complete solution of the problem. Supporters of the classical doctrine have never shut their eyes to this. They have always recognised that prices are raised by the opening up of new gold and silver mines, and depressed by the failure of existing sources of supply. But it has been held to be one of the greatest merits of the precious metals as the measure of value that, owing to their indestructibility, the annual supply is always small in proportion to the accumulated stock in the world.

This is true, but the variations in *demand* are more potent than the variations in supply. If the stock of gold is large in proportion to the annual product of the mines, it is larger still in proportion to the annual absorption into industry. This large stock and a part of the annual supply are withheld from the industrial demand only because they are needed for currency purposes. It follows that the demand for gold and therefore the value of gold arise very largely from its use as currency, in other words, from its interchangeability with credit. Credit possesses value, and it is more correct to say that the value of gold is due to its convertibility into credit than that the value of credit is due to its convertibility into gold. Convertibility into gold certainly sustains the value of credit, because it facilitates the regulation of credit. But were the union between the two dissolved, credit might still be judiciously regulated, in relation, for example, to silver or to an index number, or, as under the Bank Restriction, to nothing in particular; the gold market, on the other hand, would be swamped by the release of stocks far in excess of the amount which it could absorb, and by the prospect of an annual supply substantially greater than its previous industrial requirements.

We have already had some experience of the effects of the displacement of stocks of the precious metals from use as currency. When bimetallism broke down, silver lost the privilege, which it had shared with gold, of buying credit everywhere at or near a fixed price. The gold price of silver fell, as the change worked itself out, from 60d. to 22d. This fall was doubtless due in part, but only in part, to a rise in the value of gold and to an increase in the annual supply of silver, and it was prolonged over thirty years. But the displacement of gold by paper during the war was more rapid and more sensational. In May, 1920, the commodity value of gold was only about two-fifths of what it had been in 1913.

So long as gold remains the standard of value, any change which would greatly diminish the quantity used as currency and currency reserves should be adopted only with the greatest caution. A great extension of the gold exchange standard is sometimes recommended with the avowed object of economising or even of entirely eliminating the use of gold. Internal circulation can be adequately provided for with paper, which can then be maintained at par with foreign currencies by convertibility into foreign credits. Instead of gold reserves every central bank of issue would hold credit balances at foreign centres. In all such schemes it is essential to consider the effect on the world's standard of value, and the recommendations of the Genoa Conference for a general adoption of a gold exchange standard were inseparably associated with the proposals for stabilising the wealth-value of gold.

These large changes in the world-value of the precious metals are abnormal. And though they are sometimes unavoidable, they tend in some degree to correct themselves. A country with a large reserve of gold or silver refrains from selling it in a very unfavourable market. The silver reserves which existed in 1873 were for the most part retained until they were gradually used up in the manufacture of subsidiary currency, and the United States, under pressure from the silver interests, actually continued to accumulate increased silver reserves till 1893.

The periodic or cyclical credit expansions and credit contractions, on the other hand, and the changes in the value of gold which accompany them, must be regarded as normal. They are due to the ineffectiveness of a metallic standard as an *automatic* regulator of the currency unit. A change in the quantity of money in circulation is an *effect* not a *cause* of a change in the quantity of credit created.

The increase or decrease of cash reserves gives the banks the signal to accelerate or to retard the creation of credit, but is in itself no more than a symptom. The actual variations in the value of the monetary unit are the result of the regulation of credit, which rests in the discretion of the bankers. The use of gold as an international currency tends to prevent credit conditions in any one country from deviating from those in the others in more than a certain limited degree, but, though it partially unifies the currencies of the world, it does not prevent them from appreciating and depreciating in unison. The world value of gold is tied to the monetary units of the world. When they rise, it rises; when they fall, it falls. Thus the use of gold as currency, whether as coin or as bank reserves, makes it *less* satisfactory as a standard of value. When credit starts expanding, other commodities respond by rising in price. But gold cannot. If credit runs away, it carries gold with it. Apart from the almost negligible effect of trade activity in increasing the use of gold in industry, the gold market does not respond to the influence which has raised the prices of other commodities except by the absorption of gold for currency purposes. This absorption only takes effect gradually, and gives a very tardy warning of the need to contract credit. If gold were not used as currency, nor even as the means of settling international balances, any expansion of credit would quickly raise its market price, and if the regulation of credit were always so directed as to keep the price of gold as nearly as possible constant, action would be taken at an early stage. And since silver has ceased to be the standard currency of any of the great credit-using countries, it has regularly risen and fallen in price like other commodities in correspondence with the expansions and contractions of credit, though upon these periodic fluctuations there was for many years superimposed a general tendency to depreciate.

Criticism of any theory of currency leads up to the question, What is the real aim of a currency system? What qualities should we look for in our standard of value? In some sense the answer must be that we look for fixity of value. But fixity of value is a conception which itself calls for explanation. Value is not a quality, but a relation, and fixity of value must be fixity of value in terms of some other thing or things. No one commodity can supply a satisfactory measure, and the economist has recourse to an index number for a test. The index number ought to be based on *all* commodities, weighted in proportion to their consumption, and it ought even to embrace services, but only *consumable* commodities or services, for otherwise raw materials and intermediate services would be counted twice over. So composed the index number is simply a sample taken out of the consumers' outlay. And prices so measured will tend to rise or fall with the consumers' outlay. But not in exact proportion, for, when credit is expanding and the consumers' outlay swollen, consumption is partly fed from stocks.

But then what allowance is to be made for a general scarcity or a general abundance of commodities? If the consumers' outlay be constant, the index number will be raised by scarcity and depressed by abundance. If the index number be constant, the consumers' outlay will be raised by abundance and depressed by scarcity.

The better alternative seems to be to aim at making the consumers' outlay constant. But, of course, it must not be absolutely constant; it must vary with the population, and must also vary in some way with the quality of the work they do. If that ideal could be attained, the value of the monetary unit in terms of *human effort* would be kept fixed.

But this is not the only possible solution. The monetary unit is employed for the measurement of debts. The purpose of fixing its value is to preserve justice as between debtor and creditor. We are not here concerned with the fundamental economic conception of justice, justice in the distribution of wealth, but with the strictly limited conception of securing the fulfilment of legitimate expectations. So long as we base the economic management of society on bargains which relate to the future, the stability of the unit in which those bargains are calculated must be of paramount importance. What the lender of money consents to defer is his consumption of commodities, and it would seem to follow logically that what he should receive back is the same command over consumable commodities as he surrendered. If the same quantity of commodities represents either a greater or a smaller amount of human effort, that is the concern of the borrower.

Either view seems to be perfectly tenable, and neither seems necessarily to represent the last word of justice. Justice in this sense means no more than a code of rules dictated by expediency, and rival solutions are to be tested solely by their practical consequences.

When it comes to practical consequences, all that debtor and creditor ask is that they may know how they stand, that they may be secured against arbitrary or incalculable variations in the value of the monetary unit. If it approximates to a fixed amount of human effort, or to a fixed amount of wealth, or to something intermediate between the two, this is in all probability sufficiently accomplished.

The danger is that the unit may wander far beyond these limits. Beset by the tendency of credit towards inflation, it is always liable to fall away from whatever standard may be adopted. Unless a return to the standard is regarded as an unequivocal obligation, there is no limit to the possible depreciation. The unit may follow in the well-trodden path of the assignats, the Continental currency, and all their latter-day counterparts. A return to a standard once lost is a painful and laborious journey. And if a fixed standard is to be preserved, this painful and laborious journey must be travelled, after every indulgence in inflation. As Cobden once said of the greenbacks, after the debauch comes the headache.

It is the inherent instability of credit that is perpetually involving the world in credit expansions, each of which would threaten the collapse of the gold standard if it were not succeeded by a contraction in time. The alternation of expansions and contractions would be comparatively harmless but for the dislocation and distress which accompany the contraction. Nor is there any sufficient compensation for this in the prosperity which marks an expansion. This prosperity is largely a matter of high profits. Employment is good, and, output being correspondingly great, there is, no doubt, more wealth to go round. But notoriously, wages do not rise as quickly as prices, and on balance the great mass of the people may be little if at all benefited. The working classes have the greatest interest in a stable currency, and so long as the monetary unit does not break away from all bounds, like the assignats, the question of justice between debtor and creditor is less important than the effect of currency movements on employment and real wages.

We have traced the instability of credit to its source in our earlier chapters. We found that the initiative in production rests with the merchant and the promoter, the dealer in commodities, and the dealer in capital issues. It is they who give the order to produce. The process of production which follows gives rise to a chain of *debts*. The manufacturer or contractor becomes indebted day by day to his employees. The merchant becomes indebted to the manufacturer. But whereas the merchant's indebtedness is due at some future date, when the goods are to be delivered, the manufacturer's obligations are immediate ; his employees want to use these obligations as purchasing power. Here intervenes the banker, who takes the immediate obligations upon his own shoulders, in exchange for a future obligation which the manufacturer, as the creditor of the merchant, is in a position to give him. The banker's debts, unlike those of the manufacturer, can be conveniently used as the means of payment ; or, where legal tender money is needed for the purpose, the banker makes it his business to supply money on demand.

Thus, by giving the order to produce, the merchant indirectly creates in this new accession of purchasing power an effective demand for things equal in value to those produced. Production feeds demand, and demand stimulates production. The only limit to the process is set by the slow absorption of legal tender money into circulation. When the supply of legal tender money runs short, the brake is put on with a jolt. The banker tries to stop the merchant borrowing. The merchant curtails his orders. Production flags and checks demand; demand flags and checks production. Depression reigns, till at last a sufficient supply of legal tender money is wrung out of circulation to enable the banks to start on the career of expanding credit again.

It is one of the advantages of the standpoint which we have adopted, treating credit as the primary means of payment and money as subsidiary, that it brings out the causes and the nature of these cyclical movements with special clearness. And I think it enables us to trace the instability of credit, not so much to the banker as to the merchant and the promoter. It is an easy thing for a merchant to give lavish orders when demand seems brisk, or to let his stocks run down when the market conditions are unfavourable. But when he and his legion of colleagues all act on the same reading of the market, the one decision may tax the productive energies of the people for years, the other may cast them into the desolation of idleness.

The merchant has a legitimate and a very important and responsible function; he has to foresee what future demands have to be met, and to direct the productive resources of mankind accordingly. The capital promoter, whether he be himself a manufacturer, or merely an intermediary, exercises the same function over a longer period. Not only must they look forward to the varying demand for commodities of existing kinds, but they must anticipate the demand for new products, and must see what the consumer will want long before he has himself considered the matter. In making their forecasts they measure demand by money offered. Now anything which affects the consumers' outlay as a whole affects the money demand for *all* commodities. *Pro tanto* it vitiates the dealers' calculations. Each dealer is interested in his own commodity and learns to read the signs of the market. This would be quite difficult enough if the consumers' outlay were stable, and only the *relative* demand for commodities varied. The variation in the consumers' outlay itself introduces a further and most baffling complication. Practical men can hardly be expected to enter into the highly technical theory which underlies this variation. They have to approach it as an empirical problem. And very many never really appreciate it at all. The result is that dealing in goods and in capital issues is a much more *speculative* business than it would otherwise be.

It might be thought that the merchant's activities would be innocuous but for the fatal facilities he receives from the banker. It is his power of borrowing that enables him to increase his stocks as he pleases, and it is the banker's power of restricting credit that impels the merchant to reduce his stocks in spite of a favourable market. This is a question which we could only decide by picturing to ourselves a community without banks. Banking, as we saw in Chapter XIII., comprises two distinct functions—temporary lending, and the provision of transferable credits as a means of payment. Their union is a matter of convenience and not of necessity. Were they separated, the supply of purchasing power would lose its elasticity. But it is not at all certain that the consumers' outlay would become less elastic. Even if the stock of purchasing power were absolutely fixed, traders would always endeavour to economise balances either by borrowing or by lending. If they borrowed and lent a little too freely, the consumers' income would be increased, and the consumers' portion of the unspent margin would grow at the expense of the traders' portion. The absence of banks, with their convenient power of creating purchasing power, would only make the inevitable contraction of credit operations the more violent. Under such a system the slow passage of money into circulation when trade is active and its slow return when trade reacts would occasion the same periodicity as has been found to exist under a banking system.

Consequently, the credit cycle is not traceable to the association of the creation of purchasing power with short-term lending. Nor is it even traceable to the existence of short-term lending itself. Suppose that there were no short-term lending, so that traders could not economise balances in this way. If markets were favourable, they would reduce their idle balances by buying goods. Orders to producers would be thereby increased, production stimulated, and the consumers' income would expand. After an interval the consumers' portion of the unspent margin would encroach, as in the previous hypothesis, upon the traders' portion, traders would be unable to give orders, production would contract again, and so the cycle would set in.

Far from causing the cyclical fluctuations, a banking system diminishes their violence and facilitates their control. Though credit institutions are not themselves the cause of this phenomenon, yet where such institutions exist it is through them that the fluctuations take effect. And it is through a wise regulation of credit that there is hope of finding a remedy for them.

It is these credit movements which determine the circuit velocity of money and of credit. There is no need to dwell on the futility of any theory of currency which accepts the "rapidity of circulation" or the "needs of trade" as something given, something determined from outside independently of the currency system itself. By the "needs of trade" in regard to purchasing power we mean simply the wealth value of the unspent margin. Our analysis in the earlier chapters has shown how the unspent margin is determined. The earlier devotees of the quantity theory found it necessary to qualify that theory to the extent that a change in the quantity of currency would not necessarily produce an exactly proportional change in prices if in the interval the needs of trade had changed. More precisely it came to be laid down that, if the rapidity of circulation increased, a smaller stock of currency would support a given level of prices, and *vice versa*. In reality an increased velocity is merely one of the symptoms of a credit expansion, and a reduced velocity one of the symptoms of a credit contraction.

We have treated money as subsidiary to credit. In a highly-developed system of deposit banking, such as that of England or the United States, the justification for this is obvious. Purchasing power is created and extinguished in the form of credit. Even with a specie standard gold fresh from the mines is in the first instance sold to a bank in exchange for a credit ; it is only coined and passed into circulation when the customers of the bank ask for it.

In recent years development has everywhere been towards the predominance of credit. But even where it has gained little or no footing, the alternative is nowadays the use of notes of a central bank of issue, which, though they may be legal tender, are none the less obligations of the bank. As we saw in Chapter III., the line of demarcation between credit and money, though clear enough in principle, becomes indistinct in the case of the legal tender bank note. Though the legal tender bank note is itself more properly money than credit, it appears in the balance sheet of the bank of issue along with the deposits, and it is brought into being by the same process. The borrower is given the option of taking the sum lent either in notes or in credit, and if it is the prevalent custom to choose notes, that makes little difference to the principles of control. Control of currency nowadays rests on that association of the creation of purchasing power with short-term lending which forms the foundation of modern banking.

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